

1016

ANNUAL REPORT

OF THE

DEPARTMENT OF AGRICULTURE

OF THE

PROVINCE of ALBERTA

1915

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY



EDMONTON:

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PASTORAL SCENE IN SOUTHERN ALBERTA.

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DEPARTMENT OF AGRICULTURE,
EDMONTON, JANUARY 20, 1916.

TO HIS HONOUR

ROBERT GEORGE BRETT,

Lieutenant Governor of the Province of Alberta.

SIR,—

I have the honor to submit herewith the Report of the Department of Agriculture for the year 1915.

I have the honor to be, Sir,

Your obedient servant,

DUNCAN MARSHALL,

Minister of Agriculture.

C O N T E N T S.

Administrative Heads.

Report of the Deputy Minister.

Report of the Superintendent of Demonstration Farms.

Report of the Schools of Agriculture.

Report of the Provincial Veterinarian.

Report of the Live Stock Commissioner.

Report of the Dairy Commissioner.

Report of the Superintendent of Fairs and Institutes.

Report of the Superintendent of Women's Institutes.

Report of the Superintendent of the Seed and Weed Branch.

Report of the Poultry Superintendent.

Report of the Recorder of Brands.

Report of the Chief Game and Fire Guardian.

Report of the Crop Statistician.

Report of the Publicity Commissioner.

Report of the Sanitary Engineer.

Report of the Director of the Provincial Laboratory.

Report of the Provincial Health Officer, and Deputy Registrar-General.

Appendices—

A.—Report of the Alberta Horse Breeders' Association.

B.—Report of the Alberta Cattle Breeders' Association.

C.—Report of the Alberta Swine Breeders' Association.

D.—Report of the Alberta Sheep Breeders' Association.

E.—Report of the Alberta Provincial Fat Stock Show.

F.—Report of the Alberta Natural History Society.

DEPARTMENT OF AGRICULTURE.

Heads of Branches.

S. G. Carlyle, Superintendent Demonstration Farms.

P. R. Talbot, Provincial Veterinarian.

W. F. Stevens, Live Stock Commissioner.

C. P. Marker, Dairy Commissioner.

A. Galbraith, Superintendent Fairs and Institutes.

Miss M. McIsaac, Superintendent of Women's Institutes.

J. D. Smith, Superintendent of Seed and Weed Branch.

A. W. Foley, Poultry Superintendent.

Jas. Wilson, Brand Recorder.

Benj. Lawton, Chief Game and Fire Guardian.

C. S. Hotchkiss, Chief Publicity Commissioner.

R. B. Owens, Sanitary Engineer.

A. C. Rankin, M.D., Director of Provincial Laboratory.

Dr. T. J. Norman, Provincial Health Officer and Deputy Registrar-General.



FODDER CORN IN 1915—MEDICINE HAT DEMONSTRATION FARM.

REPORT OF THE DEPUTY MINISTER

EDMONTON, ALTA., December 31st, 1915.

HON. DUNCAN MARSHALL,
*Minister of Agriculture,
Buildings.*

SIR,—I have the honour to submit herewith the ninth annual report of the Department of Agriculture. It includes an account of changes in various administrative branches in the Department, a report on general agricultural conditions as well as special reports from the heads of administrative branches and appendices containing reports from various stock and other associations in the Province.

Changes.

Following the resignation of G. Harcourt, Deputy Minister of Agriculture, to accept work on the staff of the Faculty of Agriculture at the University, H. A. Craig was appointed to this office. S. G. Carlyle, Assistant Superintendent of Demonstration Farms, became Superintendent. The office of assistant has not yet been filled. The death of C. E. Lewis in July after a long illness left the office of Superintendent of Fairs and Institutes vacant. To this office Alex. Galbraith, of Brandon, was appointed. Miss A. Carlyle was appointed assistant to the Superintendent of Women's Institutes. Dr. H. Jamieson is at present acting Director of the Provincial Laboratory in the absence of Dr. A. C. Rankin, who is at the front, and Dr. T. J. Norman is acting for Dr. W. C. Laidlaw for the same reason.

Enlistment.

During the year some employees and officials of the Department have enlisted. They are as follows :

Dr. W. C. Laidlaw, Dr. A. C. Rankin, W. D. Turner and C. H. Pinell.

Farm Crops.

The season just closed has been an outstanding one for the farmer. It is seldom that so many influences and causes conspire to produce the beneficial results that have come to the interests of agriculture this year. In the southern part of the Province where the crop results in a given year depend largely upon the preparation in a previous year, conditions were better than they had ever been. Two or three successive years of somewhat light crops had established the virtues of the summer-fallow and the light harvest of 1914 gave time and opportunity for cultivation work. Heavy rain and snow in early autumn also made fall plowing possible and gave a good chance for farmers to meet the combined call of the Dominion and Provincial governments to prepare for heavy production in 1915. Fall plowing was common throughout the Province and the spring of the present year found more land properly prepared for crop than usual.

The season likewise proved wholly favorable. Where the total annual rainfall is not heavy the success of crops depends upon the proportion of

total precipitation falling in the growing season. Below are given figures showing the precipitation for May, June and July at three representative points in Southern Alberta for the years 1914 and 1915:

		May	June	July	Total
Calgary	.....1914	.52	2.64	2.52	5.68
	.....1915	3.13	4.02	2.93	11.13
Lethbridge	.....1914	.29	2.48	.93	3.70
	.....1915	3.03	4.84	3.44	11.31
Medicine Hat	....1914	.55	2.00	.34	2.89
	.....1915	2.72	4.67	3.58	6.97

It will be seen from the above table that the total moisture for the three places for the growing season in 1915 is about two and a half times as great as in 1914. The result of this combination of good soil preparation and favorable season conditions has been a phenomenal increase in the per acre yield and consequently in the total production. The increase in the per acre yield has been chiefly in the southern part of the Province, which is largely devoted to grain growing. By the usual means of estimate the yield of wheat is nearly thirty-six bushels against an average below twenty for the previous ten years. Oats have increased from an average below thirty-five to over fifty-seven and barley from twenty-five to thirty-five. The total production of grain is about 25 per cent. above last year's production and double what it was five years ago. The quality of grain has been high except in the case of late oats. The sudden cessation of rain early in July made ideal conditions for the sharp ripening of the wheat which was well advanced, but interfered somewhat with the weight of late oats.

To enhance the advantage to the farmer, prices have been correspondingly high. Farmers have been able to meet past or current obligations or to increase the stability and earning power of their enterprises by the purchase of breeding stock. In spite of the general fear that enhanced prices would encourage exclusive grain-growing, it appears that the general body of farmers are fully seized of the advantages of live stock enterprises and they have been held back in the past chiefly by lack of capital. It thus appears that a conjunction of influences has made it possible to register a distinct advance in agricultural interests during the year. The efforts of both the Federal and Provincial Departments of Agriculture have had some effect in stimulating the larger production of food-stuffs to which the war pointed, the season proved favorable and the farmers appear to be taking a wise advantage of conditions to improve their live stock and general surface equipment. The greatest immediate benefit has come from the large crops and high prices and from the sale of meat stock for current consumption, but it is to be expected that advantage will subsequently arise from the owning of larger live stock holdings for European supply, principally for breeding purposes, after the termination of the war.

Fodder.

Fodder crops were likewise good. Spring opened early and rains were frequent. Haying operations were delayed and some hay spoiled by heavy rains in the early part of the season. The first cutting of alfalfa suffered some on this account, but later hay of all kinds was well saved.

The general outlook for the production of crops of fodder on all lands in the Province is good. In the central part of the Province there is a progressive substitution of tame grasses on cultivated lands for

native hay and pasture. Timothy is being produced in increasing quantities and is an important commercial product. Variety in tame grass production is shown in the more frequent seeding to Kentucky Blue, Brome and Rye Grass. Alfalfa is likely to become a general crop subject to limitations in particular localities chiefly from acid conditions in close bottomed soil.

Rather wide differences in the adaptabilities of different classes of crops are evident with respect to fodders. In the southern part of the Province the standard tame meadow grasses are not easily established or kept on from year to year on a productive basis. Generally speaking the fodder must be supported on a system of cultivation similar to that employed for grain production and the bulk of the fodder must be grain fodder particularly for pasture. A new program of fodder production is already being followed. The beginning point is the growing of fall rye for late fall and early spring pasture, followed by green oats and fall wheat or other grain mixtures for summer pasture with rape for summer and fall grazing, particularly for hogs and sheep. Alfalfa or alfalfa mixed with other grasses, and green feed are the principal stored fodders. Where peas succeed they make a good addition to oat fodder for either soiling or curing.

Corn.

Corn has already demonstrated its adaptability to varied conditions and promises to bulk large in both summer and winter supply. Trials at the Demonstration Farms as well as individual experience indicate that corn is going to succeed well in many parts of the Province, subject to the choice of suitable varieties and right preparation and cultivation of the soil.

Ensilage.

The establishment of corn growing has given a new impulse to the production and use of ensilage. This food now constitutes an important part of the succulent ration for the dairy herds on the Demonstration Farms at Vermilion, Olds, Claresholm, Sedgewick and Medicine Hat. Corn has been used at all these places, but green oats, green peas and oats, and alfalfa have done equally well. The great weight of green oat crop per acre that can be produced, in the central part of the Province particularly, will make the provision of ensilage simple and economical, especially where corn production may prove backward. The use of the first cutting of alfalfa in this way will meet the trouble arising from rainy hay weather.

The importance of the establishment of a suitable program of fodder production in the right relation to conditions in the different parts of the Province cannot be over estimated. In the southern part of the Province particularly it will mean the establishment of a superstructure of stock raising on grain and fodder production that will give increased profit, will insure the conservation of fertility and will give general security to farm enterprises, such as they have not had heretofore.

Other Crops.

There is a perceptible increase in the growing of roots and vegetables. With the enormous food wealth represented in the great Alberta oat crop and the establishing of a rich variety of tame fodders, all that is needed for the production of highly developed, healthy and profitable live stock is a succulent ration of roots or silage. Rape is becoming more common for hog and sheep pasture and to some extent for cattle. Early turnips

are serving the same use and there is likewise more attention being paid to winter roots. A good many enquiries on the best method of building root cellars or root houses come to the Department.

Potatoes are now being produced in commercial quantities. Interest in horticultural work is increasing. The bulletins on potato growing and on vegetable gardening are in strong demand.

Live Stock.

In some kinds of live stock there have been rather violent fluctuations within the year but on the whole, live stock conditions have been good, especially in the latter part of the year. The high price of grain at the close of 1914 and the beginning of 1915 demoralized the hog raising interests. The greater part of the stock was marketed hurriedly and in poor, light condition. Even where feed was plentiful, many farmers sold not only their surplus but also their breeding stock. Where the crops failed in 1914 there were practically no hogs wintered. The result was that both killing and breeding stock became scarce and in the latter half of the year hogs of all sorts have been bringing high prices.

While last winter was one of the mildest we have had for some years, range stock suffered a good deal and losses occurred owing to the poor condition in which it entered the winter and to the absence of a good top of well cured grass.

The outstanding feature of the live stock interest at the close of the year is the demand for good breeding stock in meat animals. Good sows of any age are quick sellers at good prices. Owing partly to the high price of wool but chiefly to a realization of the value of the sheep in any kind of farm enterprise, the demand for sheep is higher than it ever was before in the Province. Breeding sheep are worth twice what they were three years ago. The demand for registered sheep is quite strong. The demand for pure-bred beef cattle is also strong. This applies to both bulls and females but chiefly to bulls. The demand is common to all corners of the Province from the International Boundary to the Peace River. For good animals, breeders may set their own prices.

Horses have not been high at any time during the year. A few good breeding mares have changed hands among the farmers and at present there is a somewhat active movement of heavy farm horses to Saskatchewan. The export trade has not reached large volume.

Marketing of Farm Products.

The Department has been able to promote active trading in a number of lines of farm products to the advantage of the agricultural interests of the Province. The high price of potatoes in 1914 stimulated production in the present year, with the result that local demand was more than satisfied by the harvest and producers stood to lose on their crop by low prices or by failure to sell at all. On account of the potato shortage in the East, it was possible to interest Eastern dealers in the crop and they were brought in touch with dealers and producers here by the Department, with the result that the movement of the crop was facilitated at paying prices. There are still considerable quantities in store at the end of the year with a prospect of rapidly sharpening prices after the beginning of the year. A reduction of six cents per cwt. in freight rates to Ontario was likewise secured.

A market was found in the East for the large surplus of timothy seed. Several car-load lots were sent East as a result of intermediary negotiations by the Department between Eastern and Western dealers.

Owing to the small amount of railway construction going on in the Province as well as in Saskatchewan and a corresponding slackness in lumbering and mining operations, the market for hay has been rather poor. The Department opened negotiations with the purchasing agent of Overseas supplies at Ottawa. Samples of tame and wild hay were sent forward with an estimate of the available surplus. Following and as a result of these negotiations large quantities of hay have gone out of the Province. Compressors were put in at Calgary by which the bulk of the ordinary pressed hay was reduced to half size and large quantities of timothy were handled. No wild hay in quantity has been disposed of but a trial shipment of three car loads have been sent to the front to be fed under the direction of a Western officer in order to demonstrate its suitability for army use. Thus far, there have been no reports.

Dairy Products.

Dairy interests show the same consistent progress that has been a feature of the agricultural reports for the past ten years. This year the increase over the preceding year is 35.48 per cent. in amount, with the registering of substantial progress likewise in the permanent feature of selling by grade. The handling of butter from the creameries on a grade basis has worked back to the farmer and 96 per cent. of the cream used in the manufacture of the butter handled by the Commissioner's office is purchased on grade. Information with respect to all deductions from ideal grade are sent back to the butter makers at the creameries so that the grading system has an educational as well as purely commercial interest or aspect.

The market for Alberta butter has been considerably enlarged. It extends to Montreal in the East and to Australia, from which country we formerly imported butter, on the West. The output this year has reached the sensational total of over seven million pounds.

Educational Program.

The Department has not relaxed in its efforts to foster the interests of good cultivation, good live stock and clean farms so far as the work of the Fairs and Institutes and Seed and Weed Branches can render assistance, as will appear in the reports of these Branches. The systematized educational work of the Provincial Agricultural Schools on behalf of the boys and girls will be set out in suitable detail in a special part of this report, as will the work of the Demonstration Farms.

Women's Work.

Flattering progress is being made in the work of the Women's Institutes. The number of organizations has almost trebled within the year and the scope of work has widened phenomenally. Special efforts are being directed by the women to doing their bit in patriotic and national relief work but their local influence is expanding at the same time rather than shrinking.

The Business of Farming.

It is peculiar to the work of the farmer that it is carried on in the hope that it will turn out satisfactorily rather than in the knowledge of where he is at from day to day, month to month, or even from year to year. Farming is a business as well as an art and a science and as such is greatly handicapped by the want of a system of accounting that is not too cumbersome for the busy farmer and that is sufficiently simple in idea to be capable of common application and use.

To this end the Department has combined with its courses of instruction at the Agricultural Schools a course in farm book-keeping. This is simple in character and the use of a book specially prepared by the Department with copies, examples and illustrations is really made the basis of the teaching. To extend the usefulness of the work the book is available to farmers at the cost of production. It is made up of three simple accounts consisting of a farm cost account, a farm inventory and a farm profit and loss account. The first two of these are used to show the fixed capital, capital goods and details of operations within the year and the profit and loss account the result of the year's operations. Another book suited to the farm home is provided for the keeping of household accounts.

It is hoped that these books will help to introduce some system into the business activities and transactions of the farm.

Respectfully Submitted,

H. A. CRAIG,
Deputy-Minister of Agriculture.

REPORT OF DEMONSTRATION FARMS

SIR,—I beg to submit a report of the work of the Demonstration Farms for the year 1915.

Farm Crops.

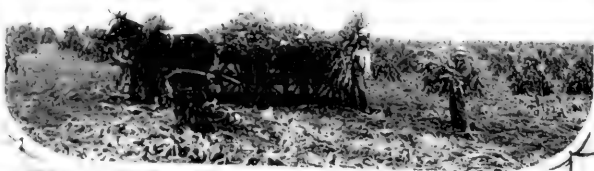
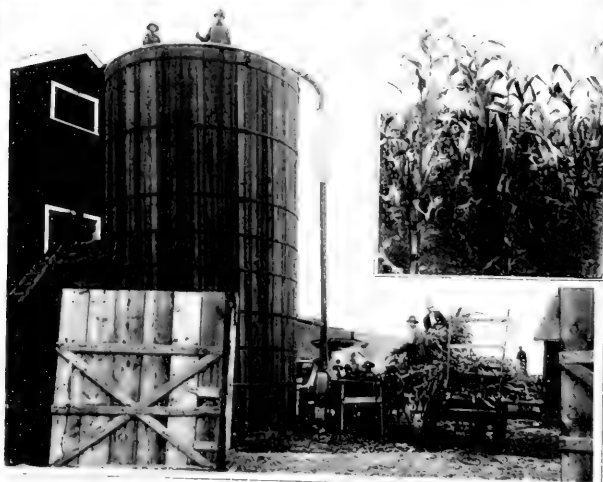
We have been favored on the Demonstration Farms during the past year with the good crops that were general over the Province. The most outstanding success likewise occurs in the semi-dry area of the Province just as has been the case with the general farmer. On the Medicine Hat farm, which has hitherto not yielded very heavy crops, the crop was heavier this year than it was on any of the other farms, owing to the copious showers during the growing season. 130 acres of oats averaged 95 bushels per acre, 20 acres of alfalfa, one and a half tons per acre, and 24 acres of corn, ten tons per acre. A silo was built for corn which held practically half the crop. The other half was set up in large stooks and fed as dry fodder, the stalks being run through the cutting box and fed in conjunction with green feed, alfalfa and roots to our herd of 40 Jerseys. The roots and corn stalks lasted until the first of March when the silo was opened. It is estimated that there is enough ensilage to last throughout the summer to supplement the pasture. The corn, while not fully matured, was fit for boiling and has made splendid ensilage. The roots were a fair crop, but owing to hot winds in August the yield was considerably affected.

On the Claresholm and Stony Plain farms the grain crops were considerably damaged by hail.

In operating the half section farms, the greatest problem has been to secure fodder crops for the stock, particularly the milk cows, in winter, and suitable pasture in summer. With the solution of this problem in view, silos have been built on five of the farms and experiments have been carried on in the curing of the various fodders, as corn, green oats, alfalfa, oats and peas, and a mixture of two of some of these crops in the same silo.

At Claresholm a silo was built in September, 1915, and the corn crop having been somewhat damaged by hail and badly damaged by early frost, it was decided to put the first cutting of alfalfa in along with the corn, also filling three or four feet of alfalfa alone on top to see how it would cure. The result was highly satisfactory and it was found that good ensilage could be made either with alfalfa alone or alfalfa and corn mixed.

On the Olds farm there was a good crop of grain and roots. 8170 bushels of grain were threshed, 6954 bushels of oats, 1176 bushels of barley, 40 bushels of flax and 4382 bushels of roots were harvested. A very heavy early frost damaged the green feed considerably. Here too there is a silo, but the district not being characteristically suitable for the growing of corn, it was decided to try nothing but pure green oats. These were cut very green, just when coming into the milk stage, and immediately run through the cutting box and blown into the silo. Four men were put into the silo to keep it well packed and to exclude all air, as the oat stalk is hollow and will pack much looser than corn, with the result that if it were not well tamped it would burn and be wholly unfit for food. A small amount of water was also sprinkled on the oats but this we now consider unnecessary. This ensilage was somewhat sour on top but improved greatly after a foot or more had been fed off. It has turned out a fairly good ensilage and is relished by the stock.



FOOD CORN HARVESTING IN DR. MEDICINE HAT
DEMONSTRATION FARM

On the Sedgewick farm there was a good crop of grain, threshing over 10,000 bushels, 1,200 being wheat, 400 barley, and the remainder oats. There was also a fairly good crop of tame hay composed of timothy and rye grass, part of which was seeded in 1913 and part in 1914, the rotation followed requires a field to be left in grass but two years on this farm. The corn crop was not heavy owing to continued wet weather during the months of June and July. It was intended to mix green oats along with the corn when filling the silo, but the green oats matured too early so that the corn was put in alone, making only fair ensilage.

The crop on the Vermilion farm was the best crop yet grown there. On eight and a half acres there were threshed 1002 bushels of registered Banner oats. The barley also yielded well and there has been better success growing peas here than on any other farm. Five acres of clear peas were sown from which were threshed 119 bushels. A field was also sown with oats and peas mixed for green feed, one part peas and two parts oats. This is perhaps the best fodder crop that has been grown on any of the farms. The corn crop lacked about 5 feet of filling the silo and this space was filled with the peas and oats which made excellent ensilage. Peas are being grown on the Vermilion, Sedgewick and Claresholm farms for the purpose of supplying the other farms with sufficient seed to mix with oats for green feed.

The corn crop was heavy but failed to mature, some green oats and peas were mixed with it when filling the silo, which improved the quality of ensilage. Green feed run through the cutting box is also mixed with the ensilage before feeding.

On the Stony Plain farm the crop has been badly hailed for the last two years. There has been success with tame hay on this farm and as the hail did not come until after most of the hay was cut, it was very little damaged. Fifty-six acres yielded seventy-eight and a half tons. A mixture of timothy, western rye grass and alsike clover is used. Up to the present, the clover has been a failure. Five acres in corn supplied us with considerable fodder, notwithstanding the damage done by hail.

On this farm, several varieties of potatoes have been tested out in conjunction with some of the farmers in the district, but owing to the damage done by hail, our experiments were badly interfered with and the results were practically valueless.

On the Athabasca farm which was started in 1914, there have been about 100 acres under cultivation and only a medium crop has been raised so far. This is due to the top soil being badly burned off and the subsoil being composed of a coarse sand. It will take some years to bring this farm into a satisfactory state of cultivation. There were good crops of roots and corn fodder, the oats and barley being only fair and peas a failure.

The total production from all the farms combined this year is as follows: oats, 35,847 bushels; barley, 3,384 bushels; flax, 354 bushels; wheat, 1,630 bushels; peas, 146 bushels; roots, 16,674 bushels; hay, 169 and one-third tons; alfalfa, 60 tons and green feed, 823½ tons.

Dairy Herds.

On all the farms herds of dairy cattle have been established as the basis of our farming operations. At Medicine Hat farm there are Jerseys composed of one-third grades and two-thirds pure-breds, comprising about 40 in all, young and old. At Claresholm there are Ayrshires, one-half

pure-breds and one-half grades, the herd ranging from 35 to 40. On the Olds farm Holsteins are kept, one-third pure-bred and two-thirds grade, the herd comprising about 45 head. At Sedgewick the dairy Shorthorns are located, about 65 in number, all pure-breds. The Vermilion farm is stocked with Holsteins, one-third pure-bred and two-thirds grade, the herd numbering about 40. Stony Plain has a herd of about 50 head of grade Holsteins, and at Athabasca are grade Holsteins and pure-bred Shorthorns.



JERSEYS BRED ON THE MEDICINE HAT DEMONSTRATION FARM

Succulent Feed.

Our problem in maintaining these dairy herds has been to supply them with cheap, succulent, bulky foods throughout the year, and our method of solving this problem up to the present time has been to sow oats or a mixture of oats, barley and wheat, about four bushels to the acre, early in the spring for pasture. The first of July another field is sown to rye, about $2\frac{1}{2}$ bushels per acre. This rye is usually ready to turn stock into by the middle or last of August and furnishes fairly good pasture until it freezes up. In the spring it comes up early again and supplies good pasture until the latter part of June, when the oats that have been seeded early for the purpose will have grown high enough for the stock to be turned on, and will afford them pasture until the rye comes in again. On the farms where tame grasses are grown a portion of this land is also used for pasture.

In winter the ration consists of green feed, corn or alfalfa ensilage, or green feed ensilage, alfalfa, tame hay, where it can be grown, prairie hay and roots, for bulky feeds, and ground oats, barley and bran with sometimes some ground flax for concentrates.

In 1915 we produced on all the farms 1,182,449 pounds of milk.

The best Holstein Cow produced	20,576 lbs. milk	630 lbs. B.F.
The best Shorthorn Cow produced . . .	10,191 "	420 "
The best Ayrshire Cow produced	10,988 "	429 "
The best Jersey Cow produced	9,319 "	444 "

Progress in Forage Production.

One of the great drawbacks in the feeding of dairy cattle and young stock in this Province is the absence of clover hay and succulent feed. Green-feed and prairie hay while being first class feed for fattening cattle and horses are not the best feed for the production of milk and the growth of young stock. In this view the Department is making special efforts in the growing of alfalfa and other forage crops. The results in 1915 have been very satisfactory, the alfalfa coming through the winter well, so that there are now from five to twenty acres seeded on each farm, the object being to have at least twenty acres at each place. The success of the crop may be attributed to the sowing of the seed in drills thirty inches apart, to the giving of a coat of manure in the fall at freezing up time, and to the harrowing first in the spring with the disk harrow and then with the drag harrow. This loosens the soil around the plant, kills the young weeds and forms a mulch.

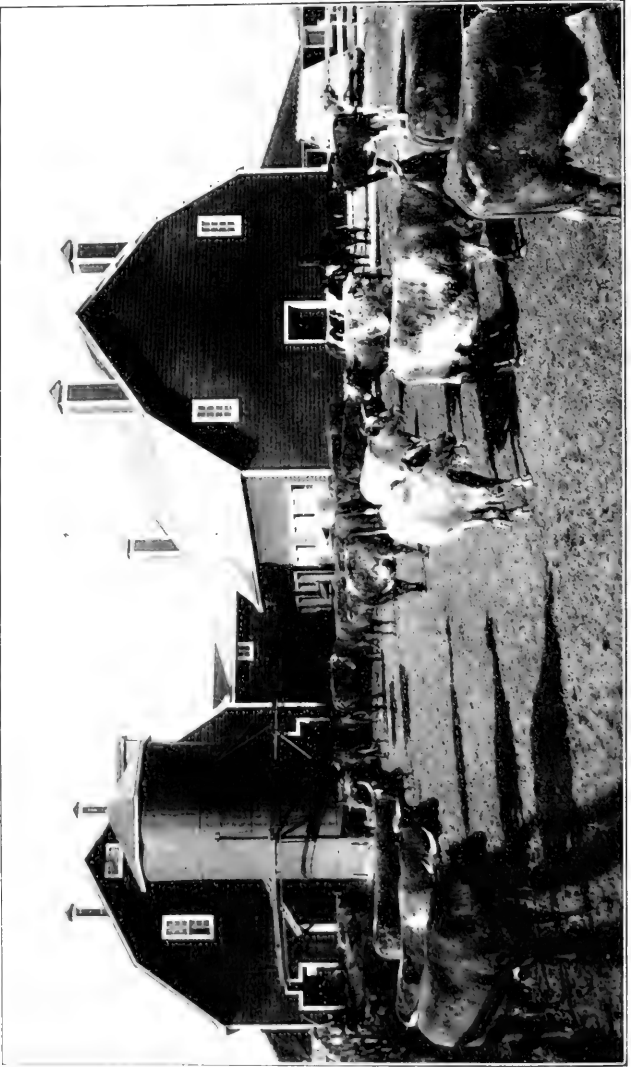
The department has also great faith in the possibilities of ensilage for the supplying of succulent feed for dairy cattle. It is found that wherever roots are grown that on the great majority of farms they are practically all fed by the first of March. This leaves the farmer nothing but dry feed for his cattle for the balance of the feeding season, and as this is the time of year that most of his cows freshen and when they particularly need succulent, cooling feed, the absence of it is accountable for a great many losses. Green-feed which constitutes the bulk of the fodder dries very rapidly in the spring of the year simply by handling. The stockman, too, generally increases his grain ration at this time, so that with so much grain and dry feed there are frequent cases of impaction, retaining of the after-births and other ailments.

It is found that in the eastern and southern parts of the Province such as Vermilion, Sedgewick, Medicine Hat and Claresholm, the farmer can successfully grow corn for the making of ensilage, but that in the western and northern parts of the Province, green oats, peas and alfalfa will have to be depended upon.

On the Demonstration farms where ensilage is being fed, little or no sickness has occurred among the stock at this time of year, and on the farms where no silo is built considerable trouble has been experienced during the past couple of years.

Sheep.

In the fall of 1914 small flocks of sheep were purchased for the Stony Plain, Olds, Sedgewick and Claresholm farms, there having been a flock established on the Vermilion farm some time before. The Vermilion flock consists of pure-bred Oxfords, the Sedgewick, pure-bred and grade Oxfords; Olds, grade Shropshires; Claresholm, grade Shropshires, and Stony Plain, grade and pure-bred Shropshires. These flocks have all done exceptionally well and have given a greater per cent. profit than any other class of live stock kept. Their summer pasture consists chiefly of oat pasture and rape sown in drills about 32 inches apart. They are also let run on the summer-fallow and any grass pasture that may be on the farm. In winter they are fed principally on tame hay, prairie hay, straw, roots and whole oats, but little or no green-feed.



LOCAL PURPOSE SHORTHORN HERD—SEEDGEWICK DEMONSTRATION FARM.

Swine.

Four different breeds of pigs are bred on the farms: Yorkshires at Stony Plain, Tamworths at Olds, Duroc Jerseys at Sedgewick and Berkshires on all the other farms. The methods of handling these are practically the same on all the farms—only one litter a year is raised, usually farrowed in the month of April or the latter part of March. A small field near the buildings fenced with good woven wire is sown to oats early in the spring and as soon as the pigs are old enough to wean they are placed in this field. A couple of A-shaped houses are provided for shelter. An adjoining field about the same size is sowed to rape in drills 30 inches apart with a gate between the fields. When the oat pasture is pretty well eaten off, the pigs can be changed into the rape to give the oats a chance to grow again. The sheep are turned into these fields along with the pigs and both have done exceptionally well. We do not depend upon the pasture to supply all the feed for our pigs but give them a liberal amount of chop so as to keep them growing and in good condition from birth to maturity. The last month they are usually shut in pens to finish off.

Horses.

Great attention has not yet been paid to horse breeding. All our horses are grades, with the exception of four pure-bred Clyde mares. The object at present is to raise enough horses on each farm to take the place of the older ones which are disposed of. In 1914 eighteen colts were raised and in 1915 nine were raised.

Systems of Rotation.

Owing to our farms being yet in the formation period, no hard and fast system of rotation has been applied. However, a system is being worked out which will be more definitely arranged from year to year as experience directs. In the southern part of the Province, one-third of the farm is put in hoed crop or under summer-fallow. The next year this hoed crop and summer-fallow is sowed to grain for threshing and the next year it is sown to pasture and green-feed. In the northern part of the Province we are doing away with the straight summer-fallow, using hoed crops and seeding down instead. The land that is seeded to grass is just left two years. As soon as the second crop of hay is cut the land is ploughed and worked as a summer-fallow the rest of the year. By seeding 35 to 40 acres a year and having from 10 to 20 acres in hoed crop and applying all the manure back on the soil, we feel that the fertility of these farms can be kept up.

FINANCIAL STATEMENT DEMONSTRATION FARMS, 1915.

DEBIT.

Operating expenses	\$53,324.12	
Value of feed, seed, etc., grown on farms and on hand Dec. 31, 1915	13,632.14	
		<u>\$66,956.26</u>

CREDIT.

Dairy	\$21,761.70	
Poultry	520.04	
Steers	1,700.34	
Hogs	5,054.56	
Horses	301.50	
Sheep	402.07	
Wool	224.16	
Wheat	2,367.35	
Barley	54.00	
Oats	10.20	
Rye	15.70	
Flax	5.00	
Hay	15.00	
Green Feed	4.60	
Roots and Vegetables	18.40	
Sundries	21.50	
Summer fallow and work done on 1916 crops	7,131.50	
Sundry Farm Improvements	2,131.61	
Fire Insurance Prepaid	401.83	
Value of Feed, Seed, etc., grown on Farms and on hand Dec. 31, 1915	24,573.20	
Balance	242.00	
		<u>\$66,956.26</u>

NOTE.—Crops on the Stony Plain and Claresholm Farms were damaged by hail to the extent of about seventy-five per cent.

Respectfully Submitted,

S. G. CARLYLE,

Superintendent of Demonstration Farms.

REPORT OF PROVINCIAL AGRICULTURAL SCHOOLS

SIR,—Below are given the reports of the Provincial Schools of Agriculture:

The Schools of Agriculture stand for the acceptance by the Department of Agriculture of the obligation to make systematic and permanent its work in behalf of our great fundamental industry. Originally and traditionally the work of the Department is chiefly administrative, regulatory or clerical in relation to agriculture, the public health, or the collection of statistics. These are the three important interests usually grouped under this department of government. The interests of agriculture is, of course, the chief of these. It requires the services of a very large staff and involves rather large and far-reaching issues and considerations of policy.

POPULAR EDUCATION.

The conditions of the country by reason of its newness involves active administrative and executive work, but likewise and chiefly, a great deal of educational and directive work. Most of our people are on the land. Most of them are from other countries or other Provinces of the Dominion itself. The conditions of soil, season and general climate are new to them. Many of them have not farmed in any country or at any time before. This makes necessary the carrying on of a vigorous policy in popular and practical education, that is, the education of adults who are actually engaged in farm work. To this end all the branches of the Department carry on active educational work, through the Demonstration Farms, Fairs and Institutes, Conventions, District Agents' Work, Short Course Schools, Demonstration Trains and through bulletins and correspondence. There is likely to be a constant and continuous demand and need for this type of work. New crops, new methods of soil and farm management and the opening of new areas are going to make it necessary to give all the direction and assistance possible to those on the land to enable them to establish prosperous homes and enterprises and to promote national production. It is true likewise that western farm communities are eager for information and improvement and are quick to put into practice new plans and ideas.

SYSTEMATIC SPECIAL EDUCATION.

On the other hand the educational work that is done on behalf of the youth of the country, and that is systematized, organized and continuous, is of much greater ultimate value and effect than the brief work of the institute or demonstration train, useful and necessary as this is. The obvious features of the schools in meeting the enlarged aims of the Department are:

- (a) Systematized and Specialized Instruction.
- (b) Chief part of the work is Practical Agriculture with a Scientific Basis.
- (c) A Rural Environment.
- (d) Schools are Co-Educational.
- (e) Good Cultural and Social Experience.



MILITARY TRAINING AT THE PROVINCIAL AGRICULTURAL SCHOOLS.

It is evident that the schools are filling a need in the Province. The enrolment for the three years is as follows:

Term	Boys	Girls	Total
1913-14	172	62	234
1914-15	216	70	286
1915-16	228	109	337

These figures show an annual increase of from twenty to twenty-five per cent. The patronage is growing satisfactorily on the side of the girls.

ARTICULATION WITH PUBLIC SCHOOLS AND UNIVERSITY.

An important aspect of the work of the schools is the place it fills in the whole system of agricultural instruction in the Province. It is recognized that the chief problems in education, for both country and city, are connected with the fitting for useful work the boys and girls just over public school age. The agricultural schools furnish this service for the country to some extent at least and the support of the schools justifies their expansion. In addition to this, however, the schools fill the gap between the public schools and the University. The subject of agriculture has been satisfactorily defined and its scope fixed recently by the adoption of a wholly modern standard text in the public schools.

VERMILION SCHOOL OF AGRICULTURE.

This report covers the work of the Vermilion School of Agriculture during the second half of its second year's course and the first term of its third year's course.

INSTRUCTION STAFF.

In September, 1915, F. S. Grisdale, Instructor in Agronomy at the Olds School of Agriculture, succeeded E. A. Howes as Principal, and Mr. H. H. McIntyre, a graduate of Manitoba Agricultural College, replaced Mr. J. C. Taggart as instructor in Animal Husbandry. These are the only changes in the teaching staff of the school since it opened its doors in the fall of 1913. The names of the members of the staff and departments administered by each are as follows:

F. S. Grisdale, B.S.A., Principal and Instructor in Agronomy.

E. S. Hopkins, B.S.A., Instructor in Elementary Science and Farm Management.

H. H. McIntyre, B.S.A., Instructor in Animal Husbandry.

L. Shanks, B.S.A., Instructor in Farm Mechanics.

Miss F. Hutton, Instructor in Household Science.

Miss A. M. Lavallee, Assistant Instructor in Household Science.

Other instructors visited the school at different times for the purpose of giving certain arranged courses. These were:

Miss L. Coates, Home Nursing.

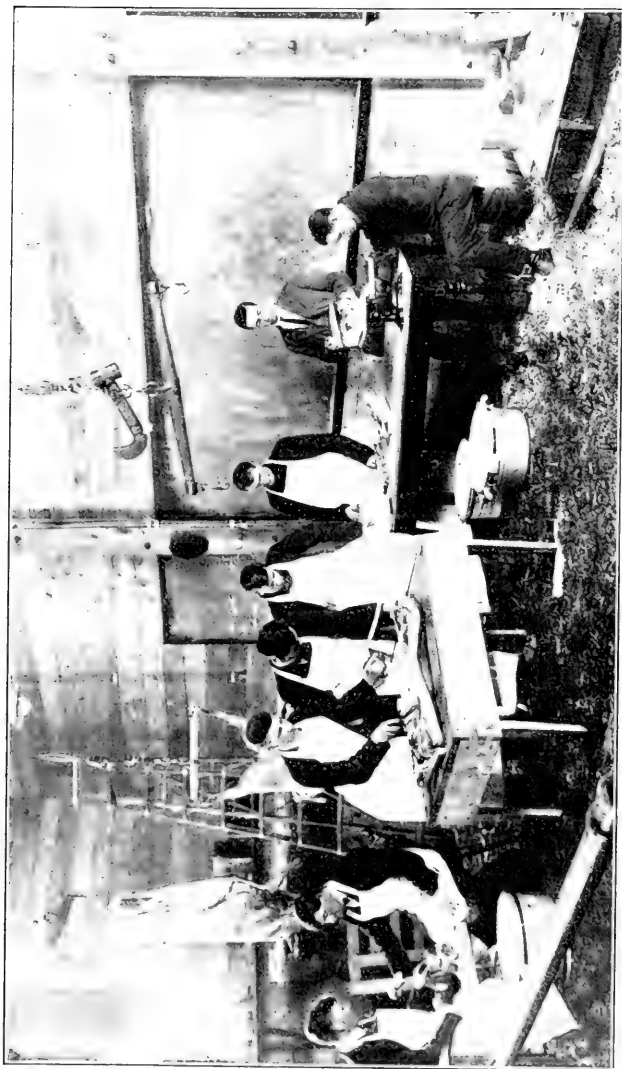
P. R. Talbot, D.V.S., Veterinary Science.

Geo. Scott, Dairy and Poultry.

Other officials of the Department of Agriculture visited the school from time to time and gave valuable assistance in the work of instruction. The Department also arranged for lectures by men prominent in their respective lines of Agricultural practice, Rural Sociology and Economics.

ENROLMENT.

That the work done by the school is being appreciated is strikingly illustrated by the fact of an increased attendance during the past year. In the first and second year the total enrolment was fifty-five, during the past year it was fifty-eight.



INSTRUCTION IN HANDLING THE FARM MEAT SUPPLY.

The following young men, whose ages vary from sixteen to thirty, were in attendance at the School of Agriculture, Vermilion:

FIRST YEAR BOYS.

S. Barnes, Blackfoot, Alta.	Gordon James, Edmonton, Alta.
I. J. Bell, Vermilion, Alta.	Noble Lucas, Wetaskiwin, Alta.
G. A. Bell, Vermilion, Alta.	J. E. Meagher, Yonker, Sask.
T. R. Booth, Lloydminster, Alta.	Hans Manski, Macklin, Sask.
L. W. Bryant, Fort Saskatchewan, A.	W. Mallough, Stainsleigh, Alta.
L. E. Bryant, Fort Saskatchewan, A.	J. H. Minns, Athabasca, Alta.
J. G. Clark, Clark Manor.	J. Martin, Strathmore, Alta.
R. Dunlop, Calmar, Alta.	Castle Scott, Warwick, Alta.
A. Gibson, Excelsior, Alta.	H. Slater, Lloydminster, Alta.
Stanley Hall, Edmonton, Alta.	F. S. Wilson, Edmonton, Alta.
W. L. A. Hanrahan, Edmonton, Alta.	McKinley Wilson, Dewberry, Alta.
J. Hansen, Camrose, Alta.	G. M. Williams, Bon Accord, Alta.
W. Hanson, Innisfree, Alta.	B. E. Williams, Bon Accord, Alta.
W. Hawkins, Strome, Alta.	

SECOND YEAR BOYS.

Ben Anderson, Tofield, Alta.	F. L. Gracey, Edmonton, Alta.
Fred Connelly, Vermilion, Alta.	J. W. Gray, Tofield, Alta.
L. L. Craig, Dewberry, Alta.	N. M. Howes, Millet, Alta.
Norman A. Clark, University of Alberta, Edmonton, S.	J. A. Lawson, Meeting Creek, Alta.
Frank Eyben, Cummings, Alta.	Sam McNaught, Strathmore, Alta.
John Eyben, Cummings, Alta.	Glen Moore, Jarrow, Alta.
Wm. M. Fleming, Sedgewick, Alta.	J. P. Rozmahel, Wavy Lake, Alta.
H. E. Gares, Gilpin, Alta.	W. S. Scott, Warwick, Alta.

The following girls were in attendance at the School of Agriculture in the Domestic Science Department:

FIRST YEAR GIRLS.

Henlen Bush, Stainsleigh, Alta.	Marion Hadley, Vermilion, Alta.
Rose Connelly, Vermilion, Alta.	Marianne Kronberg, Colinton, Alta.
Clara Christopherson, Weldon, Sask.	Alene Parsons, Wellsdale, Alta.
Lorna Drysdale, Hindsville, Alta.	Mrs. E. Parsons, Holborn, Alta.
Violet Gardiner, Irwinville, Alta.	Bernice Scott, Edmonton, Alta.
Daisy Giles, Vermilion, Alta.	Mary Warren, Edmonton, Alta.

SECOND YEAR GIRLS.

Alice Gares, Gilpin, Alta.	Beth Witherbee, Vermilion, Alta.
Mrs. H. Gilmour, Vermilion, Alta.	

NEW BUILDINGS.

During the year a new live stock demonstration room and agronomy room were added to the class room accommodation.

TWO YEARS' INSTRUCTION.

The course in the School of Agriculture consists of two terms of five months each. The first term begins about the first of November and ends the last of March. Those students successful in passing the examination at the end of the first year are allowed to enter the second year of the course. At the end of the second year a final examination is given. A diploma is granted to all who pass this final examination. In addition to this all those in the agricultural course, who, in the opinion of the examining board are eligible, are given entrance standing to the Faculty of Agriculture in the University of Alberta. The course in agriculture at the University covers three years and if successfully concluded commands the degree of Bachelor of Science in Agriculture.

COURSE IN AGRICULTURE.

All the instruction in the Vermilion School of Agriculture is made to bear on the practical side of farming. The school has an excellent equipment in all departments. It is a matter of considerable satisfaction to the instructors in the school to realize that each year the courses in the various departments are becoming more valuable to the students; more valuable, because the experience of the work of the previous years is used in working out the course of study for the year in question. The useful material is retained and the less valuable parts discarded to give place to material which is considered to be more serviceable. In the poultry and dairy departments useful lines of practical work have been introduced and have proven to be very popular. In poultry, crate feeding, killing and marketing of chickens was undertaken with the first year and the care and management of a farm flock of hens for winter egg production, was undertaken by the second year. Both of these ventures proved to be very interesting and highly instructive. In the dairy branch cheesemaking was added to the already full course of practical instruction in milk production, milk testing, buttermaking, care of separators, etc. The general lines of study in addition to those reviewed above are:

Soils and soil cultivation, judging, feeding and care of live stock, the identification and eradication of weeds, judging seed grain, selection of seed grain, rotation of crops, veterinary science, carpentry, blacksmithing, farm machinery, cement work, gasoline engines, road building, growing of small fruits, vegetables, trees and shrubs, killing, cutting up, and curing meats, farm management, and elementary courses in mathematics, book-keeping, chemistry, physics, English, public speaking and reading.

DOMESTIC SCIENCE COURSE.

The home-makers' course is primarily one of a very practical nature. It is intended to make the girls who take it efficient home-makers. It includes enough theory to make the practical truly valuable. In this course, sewing, cooking, home nursing, laundering, household administration, physiology and hygiene, sanitation, foods, household book-keeping, dairying, poultry, horticulture, physical culture and courses in elementary English, mathematics, chemistry and physics are taught.

STUDENT ORGANIZATIONS.

In addition to the purely academic work the students have various organizations. They are:

A. The student Self-Governing Organization. This organization makes the matter of discipline at the Vermilion School of Agriculture of very little worry to the Principal and at the same time is very satisfactory and adds greatly to the success of the Institution.

B. The Literary Society, which holds weekly meetings, is given over to a program of debates, spelling matches or some kind of entertainment in the Assembly Room of the school. Open debates are held once a month and it is gratifying to note the benefit derived by most of the students from the meetings, especially in the matter of being able to stand naturally and express themselves properly to an audience.

C. The Athletic Association was active and arranged for various kinds of exercise. There is a good open air rink at the school.

D. The Y.M.C.A. has done valuable service to the students in the school. The Association meets each Tuesday afternoon. A speaker is supplied for each meeting. At the end of each address latitude is given the students for open discussion of the subject in question.

EXPERIMENTAL WORK.

In connection with the school there is an experimental area of twenty acres. On this land numerous experiments are conducted. The results derived from these tests are used in the instruction given in the school and at Institute meetings. The following experiments were conducted this season:

Variety tests with potatoes, wheat, oats, barley, flax, peas, corn, millet, buckwheat, grasses, alfalfa, vegetable crops, small fruits, root crops, trees, shrubs and flowers.

EXTENSION WORK.

The work of the staff connected with the Vermilion School of Agriculture is broadly speaking, divided into two parts, that of instructing during the five winter months being one, and extension work with the students and farmers during the remaining part of the year. This extension work embraces many phases of agriculture. The Animal Husbandry Instructor, is available to farmers for consultation on live stock problems. The Mechanics Instructor gives valuable advice and information on building plans, engines, blacksmithing and carpentry. The Science Instructor is used by the public in various ways. For instance, he is ready to assist them in soil and crop problems. The Agronomist conducts considerable extension work with the farmers and students in the district which is served by the school. He co-operates with them in testing out varieties of grains, grasses, clovers and cultural methods of one kind and another. Judges are supplied to a large number of fairs, institute meetings are addressed, good farming competitions judged, and grain crops inspected for the Canadian Seed Growers' Association. Instructors are supplied to the Summer School for Teachers in Edmonton, and school gardens are supervised. In conclusion I may say that over three hundred samples of grains were tested for vitality.

RESULTS OF DAIRY COMPETITION.

Below are given in order the winners of the dairy competition:

Mrs. E. G. Reid, Vermilion.
P. R. McDonald, Vermilion.
P. Willes, Vermilion.
Smith, Prest and Hunt, Vermilion.

HONOR ROLL.

Edward Sparrow, Sedgewick.
Alex. Sparrow, Sedgewick.
Harold Lobb, Duhamel.
Philip Ure, Vermilion.
William Sheppard, South Edmonton.
Floyd Shaw, Vegreville.
Herbert Spencer, Edgerton.
Frank Gracey, Edmonton.

F. S. GRIDALE.

*Principal, School of Agriculture,
Vermilion, Alberta.*

OLDS SCHOOL OF AGRICULTURE.

ATTENDANCE.

The work of the school has progressed satisfactorily and the attendance of students has greatly increased over that of any previous year. There has been a total enrolment of 165 young men and women at this school. These were divided as follows: In the first year there were 49 girls and 84 boys. In the second year 26 boys and 6 girls. It will be noted that there are very few girls in the second year. This is due to the fact that there was a very small freshman class in girls last year. However, the total attendance is very gratifying indeed. These students came from practically every section of the central portion of Alberta, though as might be supposed the greatest number came from within a comparatively short distance of the school. Of the districts lying outside of what might be regarded as the immediate field of the school, the largest number of students came from the new C.N.R. line in the eastern part of the Province. A total of 17 boys and girls came from beyond the town of Munson on this line.

It is an interesting matter to see where the students who attended the School of Agriculture come from in the Province. Forty per cent. of our student body come from within 25 miles of the school, seventeen per cent. come from a distance of 25 to 50 miles, twenty-one per cent. come from a distance of 50 to 75 miles, and six per cent. from a distance of 75 to 100 miles. The total number coming to the school beyond the 100 mile limit, which includes those from Saskatchewan and British Columbia, constitutes only sixteen per cent. of the total number. In other words 78 per cent. of our student body come from within 75 miles of the school. It thus appears that the extent to which school services are locally available has a great deal to do with the extent to which they are taken advantage of. In other words a school in any locality creates and develops its own constituency. Twenty students of the school have enlisted.

HONOR ROLL.

Killed at Champagne, France.

Raoul Simon.

Enlisted or on Active Service.

R. Georges Figarol.
J. R. Burns.
J. A. Goldie.
W. Whiteside.
J. D. Quantz.
T. Johnson.
B. E. Hammond.
A. McNeil.
M. Moir.
G. A. Whiteside.

H. Batly.
O. Miller.
J. Hutchison.
E. Lee.
H. Gallagher.
H. Thornton.
A. Kemp.
W. Bicknell.
William Rogers.
Peter Menzies.

LIST OF STUDENTS FOR 1915-16.

FIRST YEAR MEN.

Gordon Anderson, Shepard.
Paul Allen, Acme.
Frank Addison, Markerville.
William A. Black, Hope Valley.
Henry Backstrom, Highland Park.
Gordon Bowers, Airdrie.
Guy N. Barham, Evarts.
Ned Beebe, Hastings Coulee.
Harold Bellamy, Keoma.

Hjalmar Carlson, Olds.
Dean Curtis, Olds.
Alex. J. Cuthbertson, Bassano.
Frank Cosgrove, Gleichen.
James Clark, Stettler.
L. E. Chandler, Didsbury.
Clifford Clemens, Coronation.
D. L. Campbell, Bowden.
James E. Carruthers, Munson.

Simpson J. Crozier, Richdale.
 E. J. Carroll, Alix.
 Thomas Cleghorn, Stanmore.
 Thomas G. Clark, Acme.
 Peter L. Dick, Didsbury.
 Nels Dahl, Standard.
 George Desso, Oyen.
 Osmond Ennis, Alix.
 Thomas H. Farmer, Olds.
 Ed. Farquharson, Eagle Hill.
 Ewart Ferguson, Swalwell.
 Horace Gallagher, Calgary.
 Richard Guenther, Olds.
 Edward Gibb, Munson.
 George Grant, Killam.
 Danzil Gibson, Muhlbach.
 J. E. Howe, Olds.
 Milo Huffman, Langdon.
 J. A. Hughes, Didsbury.
 John D. Hutchinson, Olds.
 Cecil Hutchinson, Ponoka.
 Charles L. Huskins, Pitcox.
 John Hansteen, Craigmyle.
 Robert Hutchison, Olds.
 William L. Jacobson, Stettler.
 Walter Jackson, Shepard.
 Samuel Johanneson, Bergen.
 Edward B. Lee, Ponoka.
 John Lloyd, Langdon.
 Evan Lloyd, Ponoka.
 Harold J. Lund, Dowling Lake.
 John Martin, Dalroy.
 Joseph Marsden, Excel.

John D. McRae, Delburne.
 L. W. Manning, Bull River, B. C.
 Thos. H. Mather, Stanmore.
 Ernest C. Madsen, Olds.
 George D. Malcolm, Innisfail.
 Albert F. Malcolm, Innisfail.
 Emil Nasset, Strathmore.
 J. Lawrence Owens, Ponoka.
 Lionel Powne, Erskine.
 Jack Peckham, Olds.
 Edward Phillips, Langdon.
 Vernon Parker, Brant.
 Orrin C. Powell, Olds.
 John W. Rennie, Didsbury.
 William G. I. Roddick, Killam.
 Roy Roberts, Shepard.
 Lloyd Ray, Didsbury.
 Vernon Shantz, Didsbury.
 Jacob Shantz, Didsbury.
 Harold Scheer, Strathmore.
 Charles Switzer, Lacombe.
 Harry Switzer, Lacombe.
 Lloyd Smith, Olds.
 Fredrick Sykes, Bashaw.
 George M. Snell, Oyen.
 Oliver Tolman, Rumsey.
 Leslie West, Strathmore.
 Trelfa Worthington, Westerdale.
 Norman Weber, Didsbury.
 John O. Wood, Carstairs.
 James F. Williams, Ensign.
 W. T. Woodyard, Oyen.

FIRST YEAR GIRLS.

Anna Archibald, Lochinvar.
 Lucy E. Brown, Innisfail.
 Mary M. Crow, Dalroy.
 Hattie Cross, Olds.
 Bertha M. Cates, Fairacres.
 Ethel E. Curtis, Olds.
 Grace G. Crawford, Ponoka.
 Ruby Cox, Cereal.
 Louise J. Fleury, Talbot.
 Violet Frost, Olds.
 Eunice E. Grant, Lacombe.
 Jessie Grant, Killam.
 Helen Holmes, Olds.
 Elsie R. Hutchinson, Olds.
 Maggie B. Hope, Sterlingville.
 Evelyn Herdman, Olds.
 Nellie Hardy, Didsbury.
 Marion Ide, Olds.
 Myrtle Johanson, New Norway.
 Emilie R. Johnson, Markerville.
 Cora E. Johnson, Leduc.
 Sarah Johanneson, Bergen.
 Anna Klingsell, New Norway.
 Bessie King, Acme.
 Annella Lamb, Sunnyslope.

Alberta M. Munro, Halifax, N. S.
 Lydia Mueller, Didsbury.
 Pearl M. Morrical, Clive.
 Elsie G. Malcolm, Innisfail.
 Olive M. Moffat, Patience.
 M. A. Marsden, Excel.
 Hilda J. McDermid, Munson.
 Ida McKenzie, Strathmore.
 A. Mae Mitchener, Red Deer.
 Edith C. McKinnon, Red Deer.
 Lilly P. Nichol, Killam.
 Ella B. Pritchard, Bawlf.
 Kathleeta Perry, Talbot.
 Pearl Reist, Didsbury.
 Mabel Spalding, Carstairs.
 Isabel Sinclair, Innisfail.
 Alberta Shantz, Didsbury.
 Emma A. Skode, Chinook.
 Ethel Thomsen, Dickson.
 Thora M. Thompson, Markerville.
 Louisa M. Tester, Innisfail.
 Gladys Trimble, Red Deer.
 Alice Whiteside, Penhold.
 Mabel A. Ward, Carstairs.

SECOND YEAR MEN.

Arnold H. Baker, Clive.
 Walter Bicknell, Didsbury.
 Arthur Cornode, Crossfield.
 Arden Deadrick, Didsbury.
 Alex E. Ellis, Lacombe.

Fred W. Falkner, Strathmore.
 George W. Gorman, Edmonton.
 Jack Hodgson, Calgary.
 Harold C. Hopkins, Bentley.
 Arthur Kemp, Calgary.

H. W. Kirkland, Battle Creek, Mich.	Harold Phillips, Langdon.
Campbell Lindsay, Eye Hill.	Wilmer Reist, Didsbury.
P. H. Menzies, Chilliwack, B. C.	J. W. Smith, Olds.
George A. Murray, Killam.	Carroll Stewart, Merna.
Paul Marnach, Olds.	Harold Steele, Lacombe.
A. L. Miller, Olds.	Oscar Sundberg, Alix.
Mack B. McColl, Collholme.	Harold R. Thornton, Red Deer.
Hector McArthur, Knee Hill Valley.	Albert B. Wiancho, Earlville.

SECOND YEAR GIRLS.

Lilian Archibald, Lochinvar.	Helen McCornack, Airdrie.
Amy B. Cattnach, Sterlingville.	Magdalene E. Moore, Olds.
Zelma Carrico, Olds.	Mrs. Wong Pong, Olds.

Graduating Exercises.

As will be noted the above 26 boys and 6 girls entered the second year classes of this institution, 21 boys and 4 girls completing the course and receiving their diplomas. Mr. H. A. Craig, Deputy Minister of Agriculture for the Province, represented the Hon. Duncan Marshall, Minister of Agriculture, at the graduation exercises. Dr. H. M. Tory, President of the University and Chairman of the Board of Agricultural Education, was also present, and presented the diplomas to the students who had completed the two year course.

Discipline.

As has been reported for the preceding years, at this Institution the conduct of the students has been excellent. A few misdemeanors were brought to the attention of the principal, but on the whole the discipline has been good, and a fine spirit of loyalty pervades the student body.



A CLASS IN BLACKSMITHING

Instruction Staff.

As might be expected the work of the school year with the large number of students in attendance has been very constant and quite heavy for the staff. Notwithstanding this the courses given have been fully

appreciated by the students in attendance. Two changes were made in the staff last year. Mr. J. G. Taggart from the Vermilion School took charge of the science work, and Mr. O. S. Longman from the Claresholm School of Agriculture succeeded Mr. F. S. Grisdale in the Agronomy department. The regular staff of the school is as follows; W. J. Elliott, B.S.A., Principal and Instructor in Animal Husbandry; O. S. Longman, Instructor in Field Husbandry; C. R. Holeton, B.Sc., Instructor in Farm Mechanics; J. G. Taggart, B.S.A., Instructor in English and Elementary Science; Miss Marjorie Goldie, Instructor in Household Science; Miss Ada Davis, Assistant Instructor in Household Science; Miss Laurie Coates, Instructor in Home Nursing.

Outside of the regular work of the staff, valuable assistance has been rendered by specialists in charge of the other branches of the Department of Agriculture. We will simply mention those who have rendered this assistance: Mr. H. A. Craig, Deputy Minister of Agriculture; Dr. P. R. Talbot, Provincial Veterinarian; Mr. Alex. Galbraith, Superintendent of Fairs and Institutes; Mr. A. W. Foley, Provincial Poultryman and Mr. H. S. Pearson, Dairy Inspector for the Province. In addition to these, we have had special lectures by Dr. J. G. Rutherford, Vice-Chairman of the Board of Agricultural Education, and Mr. E. A. Howes, Dean of the Faculty of Agriculture for the University of Alberta. For the work given by these gentlemen we are greatly indebted.

Increase in Class Room Accommodation.

During the year, two useful class rooms have been furnished in a separate building. One of these is equipped for grain work and the other for live stock demonstrations. The addition has made the handling of classes much easier.



EXHIBIT OF HOUSEHOLD SCIENCE WORK FROM THE
AGRICULTURAL SCHOOLS

Experimental Work.

The work of experimenting with different varieties of grains, fodders, roots, garden crops, shrubs, trees, etc., is being suitably emphasized. The condition of the tilth is not yet ideal for the best class of work and it is not yet possible to set out results of final significance and value as will be the case when work extends over a series of years. The work is, however, already highly attractive to students and is making progress.

Extension Work.

The extension work carried on by the staff of the School of Agriculture is taking definite form. We are finding certain lines of work that are very acceptable to the farmers, and work that we believe is certain to have a very beneficial effect. One of these endeavors is the work of a dairy competition carried on by the members of the staff among the farmers of the district. The Department of Agriculture offers to farmers who keep records of the cows, handsome live stock prizes for the best milk cows in the district, and some member of the staff of the School of Agriculture visits the farm once every month or two to take samples of milk for testing with the Babcock tester. During the past summer we had 285 cows on test, and while we find a certain number of first class dairy cows in the district, we also find that at least one-third of the dairy cows in the district surrounding Olds are not any more than paying for their keep. Mr. Lars Jensen has perhaps the best grade herd, as 11 of his cows averaged over 7,000 pounds of milk each. The winners of this dairy contest were as follows:

- 1st. Lars Jensen, Olds.
- 2nd. C. L. Holmes, Olds.
- 3rd. A. W. Upham, Olds.
- 4th. Joseph Stauffer, Olds.

Farmers are taking an intense interest in this dairy competition, and we anticipate that it will grow very much in future.

Experimental Union.

An experimental union has been organized among the students and ex-students of the School of Agriculture. The agronomist at Olds is secretary of the Association, and the endeavor is to secure the best strains of wheat, oats, barley, and peas that may be adapted to this district. Last year a large number of our student body took home various samples of grains for testing on their home farms. The Association meets every fall at the School of Agriculture and the reports that are brought in from ex-students and students with regard to work conducted during the summer are very interesting and instructive. The Experimental Union is continuing to do good work and 27 students are undertaking the work again for the coming summer.

The Demonstration Farm.

While the School of Agriculture and the Demonstration Farms are separate and independent as to management they have always stood in cordial and satisfactory relation. The School of Agriculture has free use of the live stock on the Demonstration Farms for instructional purposes. The very great advantage in this will be seen when we remember that the School of Agriculture has excellent stock to work with, and no expense whatever in keeping it. We wish to express our appreciation of the help received from the manager of the Demonstration Farm during the past year.

Institutes and Short Course Schools.

While the large attendance of students at this school prevented members of the staff from doing much in the way of giving assistance at short course schools and farmers' institutes during the past year, a number of calls have been met. The various members of the staff have been called on frequently to judge live stock, grains, etc., at the various fairs. This work is desirable as it keeps the members of the staff closely in touch with actual conditions in the Province.

Special Train.

During last summer the Department of Agriculture ran a special agricultural train over the Province. The Olds School of Agriculture with the other two schools were asked to contribute certain equipment of the train. The Schools of Agriculture were interested in three cars, one containing models of barns, blacksmith and other mechanical work. The second car was fitted up with grain, threshed and in sheaf, together with exhibits of fruit and weeds and the seeds of weeds that are prevalent in the Province of Alberta. The third car was equipped by the Household Science Department of the three schools and included work in home nursing, sewing, cooking, etc., with demonstration work pertaining to the laundry, and also with equipment of labour saving devices for the home.

Farmers' Excursion.

The Midsummer Farmers' Excursion organized by the Fairs and Institutes Branch was well patronized. About 600 visitors inspected the buildings, equipment, experimental plots and the fields of the farm.

Office Work.

The correspondence work in connection with the office of the School of Agriculture at Olds is increasing every year. A large number of enquiries were received from farmers in the central portion of the Province, asking for information regarding things pertaining to agricultural work. During the year, 2,671 letters have been answered, and in addition to this some 1,812 circulars sent to individuals and to the press. These circulars have had relation to current problems in agriculture.

The School and the Public.

Aside from the work that is given for the five months in the winter, and from the extension work that is carried on by the staff of the School of Agriculture during the summer, the school doors are open every working day of the year, and our aim is to have some member of the staff present at all times to answer any inquiries from those who visit the school from time to time. In this connection it might be noted that more and more are the farmers of the district becoming interested in the School of Agriculture, and in the experimental work that is being carried on. The U. F. A. frequently hold meetings in the School of Agriculture and the Women's Institute hold their meetings regularly in the school. In addition to this there are special meetings pertaining to poultry, etc., held from time to time. The school is open at all times for meetings pertaining to agricultural or home development work.

Respectfully submitted,

(Signed) W. J. ELLIOTT,
Principal.

CLARESHOLM SCHOOL OF AGRICULTURE.

On November 3rd, 1915, the Provincial School of Agriculture at Clareholm commenced work with the following staff:

Mr. W. J. Stephen, B.A., B.S.A., Principal and Instructor in Field Husbandry.

Mr. H. W. Scott, B.S.A., Instructor in Animal Husbandry.

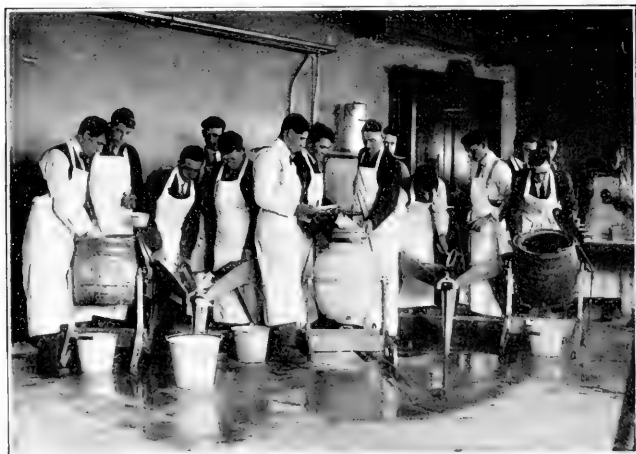
Mr. A. E. Qually, B.S.A., Instructor in Mechanics.

Mr. J. C. Hooper, M.A., Instructor in Science.

Miss Myrtle Hayward, Instructor in Household Science.

Miss Grace Robertson, Assistant Instructor in Household Science.

Mr. W. R. Barker, B.S.A., Instructor in English and Mathematics.



DAIRY INSTRUCTION AT THE PROVINCIAL AGRICULTURAL SCHOOLS.

The following special lecturers gave instructions at the school during the year:

Mr. Alex. Galbraith, Special Lecturer on Horses.

Dr. P. R. Talbot, Instructor in Veterinary Science.

Mr. A. W. Foley, Instructor in Poultry.

Mr. H. S. Pearson, Instructor in Dairying.

Mr. Jas. McCaig, Special Lecturer on Sheep.

Lectures on "*Rural Life Problems*" were given by the following:

Mr. H. A. Craig, B.S.A., Deputy Minister of Agriculture, Dr. J. C. Miller, Director of Technical Education for Alberta, Mr. F. McNally, Principal of Camrose Normal School, Mr. Alex. Galbraith, Superintendent of Fairs and Institutes, Prof. E. A. Howes, B.S.A., Dean of the Department of Agriculture, Edmonton.

The following students registered for the year's work :

FIRST YEAR GIRLS.

Miss Eva Pound, Atlee, Alta.	Miss Helen Wickson, Cayley, Alta.
Miss Clara Pound, Atlee, Alta.	Miss Evelyn Thompson, Winnipeg
Mrs. J. Mitchell, Claresholm, Alta.	Miss Fanny Coombs, Cardston, Alta.
Miss G. Gardener, Claresholm, Alta.	Miss Amy Straughan, Parkland, Alta.
Mrs. T. A. Sundal, Taber, Alta.	Miss Mabel Hansen, Aetna, Alta.
Miss Bertha Tigner, Blackie, Alta.	Miss Helen Porter, Grassy Lake, Alta.
Miss Ella Woitte, Warner, Alta.	Miss Elsie Cotter, Empress, Alta.
Miss Sybil Atkins, Cardston, Alta.	Miss Effie Nowlin, Claresholm, Alta.
Miss Hazel Barr, Claresholm, Alta.	Mrs. M. L. Walden, Stavely, Alta.
Miss Lulu Winkler, Taber, Alta.	Miss Lella Pope, Blackie, Alta.
Miss Julia Grady, Warner, Alta.	Miss Agnes Hansen, Blackie, Alta.
Miss Marie Caron, Aldersyde, Alta.	Miss Mary Scott, Edmonton South,
Miss Ruby Rowland, Aldersyde, Alta.	Alta.
Miss Elizabeth Walsh, Montreal, Que.	Miss Shoda Whitehead, Claresholm,
Miss Francis Baker, Nanton, Alta.	Alta.
Miss Edith Baker, Nanton, Alta.	Miss Alta Whitehead, Claresholm,
Miss Dagmar Jensen, Warner, Alta.	Alta.
Miss Rena Stafford, Brooks, Alta.	Miss Eva Sorenson, Claresholm, Alta.

SECOND YEAR GIRLS.

Miss Minnie Lepard, Claresholm, Alta.	Miss Effie Blackwood, DeWinton,
Miss Mary Jackson, Calgary, Alta.	Alta.
Miss Mabel Maxwell, Claresholm, Alta.	Miss Mabel Straughan, Parkland, Alta.
Miss Flora Morrison, High River, Alta.	Miss Caroline Malchow, Stavely, Alta.

FIRST YEAR BOYS.

Philip Stumpf, Seven Persons, Alta.	Robert Wobick, Champion, Alta.
E. Larson, Vulcan, Alta.	John Burwash, Carmangay, Alta.
H. Johnson, Vulcan, Alta.	Sylvester Shumaker, Claresholm, Alta.
Jas. McFarland, Champion, Alta.	Warren Porter, Grassy Lake, Alta.
T. A. Sundal, Taber, Alta.	Jas. Horner, Macleod, Alta.
Jas. Drinnan, Calgary, Alta.	Jas. H. Mitchell, Coaldale, Alta.
Thos. Kyte, Milk River, Alta.	Alfred Matlock, Champion, Alta.
Geo. Rowley, Milk River, Alta.	Ross Walker, Reid Hill, Alta.
Arthur Bulman, Warner, Alta.	Otis Rice, Claresholm, Alta.
Wm. Fryberger, Gem, Alta.	Peter Peterson, Retlaw, Alta.
Stanley McGinnis, Carmangay, Alta.	J. Sears, Nanton, Alta.
Clarence Fredell, Blackie, Alta.	Ernest Hansen, Blackie, Alta.
Clarence Tigner, Blackie, Alta.	Paul Sockvitnee, Lomond, Alta.
Frank Yeo, Calgary, Alta.	R. Pollock, Retlaw, Alta.
B. Bailey, Magrath, Alta.	John Nelson, Claresholm, Alta.
I. Gehman, Okotoks, Alta.	Foster Harvey, Raymond, Alta.
Chas. Dullea, Stavely, Alta.	Arthur Anderson, Claresholm, Alta.
Ray Gorrill, New Dayton, Alta.	Henry Anderson, Claresholm, Alta.
O. Nesting, Seven Persons, Alta.	Lester Wickson, Cayley, Alta.
C. SeEVERS, Vulcan, Alta.	Herbert Campbell, High River, Alta.
S. Leitch, Alderson, Alta.	Mervin Norton, Vulcan, Alta.
T. Graham, Warner, Alta.	Leon Walker, Claresholm, Alta.
W. Gordon, Warner, Alta.	John Amundson, Claresholm, Alta.
Milton, Hansen, Aetna, Alta.	C. Reem, Cayley, Alta.
Chalmer Matlock, Champion, Alta.	Raymond Walker, Claresholm, Alta.
Leroy Fitzpatrick, Lawndale, Alta.	A. Malm, Retlaw, Alta.
Dewey Greenlee, Lawndale, Alta.	P. McAndrews, Retlaw, Alta.
Weldon Greenlee, Lawndale, Alta.	J. Tuffeland, Taber, Alta.

SECOND YEAR BOYS.

H. T. Harris, Retlaw, Alta.	Goldie Straughan, Parkland, Alta.
L. W. Coombs, Cardston, Alta.	Karl Dole, Gem, Alta.
O. J. Rushfeldt, Vulcan, Alta.	Clarence Cyr, Rosebud Creek, Alta.
W. Rushfeldt, Vulcan, Alta.	John Morrison, High River, Alta.
Walter Nielson, Carmangay, Alta.	Wm. Edy, Carmangay, Alta.
C. E. Davis, Vulcan, Alta.	Thos. Long, Macleod, Alta.

Dean Campbell, Vulcan, Alta.
 LeRoy Nielson, Carmangay, Alta.
 Geo. E. Bailey, Magrath, Alta.
 Deral Hummon, Carmangay, Alta.
 Cecil Tapp, Nanton, Alta.

Jos. E. Straughan, Parkland, Alta.
 Walter Clark, Vulcan, Alta.
 Milton Butler, Claresholm, Alta.
 A. Butler, Claresholm, Alta.

New Live Stock Pavilion and Agronomy Room.

The erection of this building for the judging of live stock and the handling of grain greatly aided in the management and instruction of the classes. As it was before, considerable difficulty was found in securing a sufficient number of class rooms.

Extension Work.

During the summer of 1915 much extension work was done among the farmers in connection with ordinary farm operations, the eradication of weeds, cut worms, etc., and the conducting of a dairy competition which had in it the herds of fifteen farmers. This competition drew to a close on January 31st, 1915, the following being the winners in the two hundred and forty days' test.

1. J. H. Walton, Claresholm, Alberta.
2. D. Hummon, Carmangay, Alberta.
3. E. H. Dahlin, Claresholm, Alberta.
4. Alex. Edey, Carmangay, Alberta.

The following prizes were given to these gentlemen by the Department of Agriculture on March 24th. Mr. H. A. Craig, Deputy Minister of Agriculture, presented these prizes:

- 1st. Heifer Calf over six months old, Shorthorn.
- 2nd. Heifer Calf under six months old, Holstein.
- 3rd. Shropshire Ewe.
- 4th. Berkshire Sow.

Closing Exercises.

Owing to the earliness of the spring, the Board of Agricultural Education decided to permit the school to hold its final examinations one week earlier than usual, the result being that the final examinations with both years commenced on March 18th, in the following subjects:

FIRST YEAR BOYS.

Field Husbandry
 Animal Husbandry
 Farm Mechanics
 Veterinary Science
 Farm Dairying
 Poultry
 Horticulture

Chemistry
 Physics
 Botany
 Bookkeeping
 English
 Mathematics

SECOND YEAR BOYS.

Field Husbandry
 Animal Husbandry
 Veterinary Science
 Farm Mechanics
 Dairying
 Poultry
 Horticulture
 Chemistry

Farm Management
 Farm Bookkeeping
 English
 Mathematics
 Soil Physics
 Botany and Entomology
 Bacteriology

FIRST YEAR GIRLS.

Cooking	English
Sewing	Arithmetic
Laundry	Horticulture
Household Administration	Farm Dairying
Physiology and Anatomy	Poultry
Home Nursing	Chemistry
Sanitation	Embroidery
Foods	Home Bookkeeping

SECOND YEAR GIRLS.

Cooking	Arithmetic
Sewing	Home Bookkeeping
Household Administration	Horticulture
Hygiene	Home Dairying
Home Nursing	Poultry
Foods	Embroidery
Household Chemistry	Bacteriology
English	

Diplomas in Agriculture and Household Science were presented on the evening of March 24th by Dean Howes, to the following:

ASSOCIATE DIPLOMAS IN AGRICULTURE.

H. T. Harris	Cecil Tapp
O. J. Rushfeldt	G. Straughan
W. Rushfeldt	C. Cyr
W. Nielson	J. Morrison
C. E. Davis	W. Edey
LeRoy Nielson	Thos. Long
Geo. E. Bailey	J. E. Straughan
Deral Hummon	

ASSOCIATE DIPLOMAS IN HOUSEHOLD SCIENCE.

Miss M. Jackson	Miss E. Blackwood
Miss M. Maxwell	Miss M. Straughan
Miss F. Morrison	Miss C. Malchow

Addresses were also delivered by the following: Mr. H. A. Craig, Edmonton, Mr. Blackwood, De Winton, and Mr. W. J. Stephen, Claresholm.

Prior to the closing of the school an experimental course was outlined with the first year boys, to be conducted on their own farms during the summer and to be reported on when the school opens for the autumn term.

Mr. L. Fitzpatrick will work with registered Marquis.

Mr. C. Matlock will work with alfalfas.

Mr. D. Greenlee will work with Mensury barley.

Mr. R. B. Walker will work with turnips.

Mr. H. Johnson will experiment the feeding of horses and the growing of alfalfa.

Mr. C. Fredell, strawberry plants.

Mr. C. Tigner, small fruits.

Mr. I. Gehman, alfalfa.

Mr. E. Hansen, alfalfa.

Mr. R. Pollock will experiment on alfalfa growing and farm book-keeping.

A. Bulman, tractor work and alfalfa.

R. Wobick, corn.

S. Shumaker, experiments in soil culture.

J. Burwash, raising hogs.

Ross Walker, raising hogs.
O. Rice, corn.
J. Sears, raising calves.
J. Tuffeland, corn.
A. Malm, feeding horses.
A. Reem, gas engines.

The balance of the first year boys will choose their experimental work and report in a very short time.

It is the intention to have certain of the instructors from the School visit the farms of these boys during the summer to give instruction and to keep in touch with the experimental work that is being conducted as well as to give assistance in any other line of work that will be needed.



A CLASS IN GRAIN JUDGING

Dairy Competition for 1916.

On April 1st another Dairy Competition similar to the one conducted, has been commenced. Farmers are registering their herds rapidly with the School for this work.

Plot Work at the School of Agriculture.

There are twenty acres allotted for experimental work in connection with the School. This work includes experiments with Registered Marquis Wheat, Registered Banner Oats, Commercial Wheat, oats, barley, peas, flax, emmer, and spelts. Much attention is being given to the raising of grasses, clovers, alfalfas, field roots, corn, potatoes, trees for ornamental purposes and for windbreaks, flowers and shrubs and to general gardening. The results obtained in 1915 with the grasses, clovers and alfalfas, corn and other crops that have been difficult to grow in the South are very encouraging.

Cultures.

The Bacteriological Department of the School prepares annually nitro cultures for the inoculation of clovers, alfalfas and peas. In 1915 over five hundred farmers in Saskatchewan, Alberta and British Columbia received these cultures. This spring a large number of cultures are being ordered. These can be got by making application to the School. The cost is a nominal one: for example a twenty-five cent bottle will inoculate sixty pounds of alfalfa, red clover or peas.

Excursion to the School of Agriculture.

On August 6th, 1915, excursions were run from various parts of the South to the School. Much interest was manifested by the visitors in the Demonstration Farm work and in the experimental work. About six hundred visitors were present. It is to be hoped that the Department will have more of these excursions this year and take in even a larger territory.

Co-operation with the Other Branches.

The staff gave assistance during the summer in the work of the Demonstration Train which was run through the Province. Judges were sent to a number of fairs and speakers to Institute Meetings whenever it was possible to do so.

Honor Roll.

The following students have enlisted for Overseas Service from this School:

H. Middleton	T. A. Sundal
E. Buckingham	H. Campbell
J. Walker	P. Peterson
J. Macdonald	S. Leitch
J. Jamieson	J. Horner
H. J. Hirsch	J. Mitchell
J. Dougan	S. Ellis
W. V. Porter	

Flag Pole Presented by the Government of British Columbia.

The Government of British Columbia kindly presented to the School a seventy-five foot flag pole.

Respectfully submitted,

W. J. STEPHEN,
Principal.



DIRECTOR.
DUAL PURPOSE SHORTHORN BULL AT HEAD OF SEJGIEWICK DEMONSTRATION FARM HERD.

REPORT OF THE PROVINCIAL VETERINARIAN

SIR,—I have the honour to submit herewith the annual report of the Provincial Veterinarian's Branch of the Department for the year 1915.

The work of this branch consists of educational work, of giving assistance to farmers and ranchers throughout the Province in the prevention and eradication of those diseases which do not come under the jurisdiction of the Dominion government, and of guarding the health and directing the care of the live stock kept on the Demonstration Farms.

EDUCATIONAL WORK.

(1) *Agricultural Schools*.—During the school term, which runs from about November 1st to March 27th, lectures on Veterinary Science are given at the three Provincial Schools of Agriculture, namely, Vernon, Olds and Claresholm. The work taken up in these lectures consists of practical demonstrations of the examination of horses for diseases and unsoundness affecting the feet and legs, the discussion of infectious diseases in live stock, especially those which occur most frequently in the Province, the care and treatment of sick animals, and, in the case of barb wire cuts and wounds of different kinds, the different methods of stopping blood and assisting healing. Lectures are given on the care of farm animals, special attention being given to the care of brood mares as regards feeds, symptoms and care while foaling, care of the mare after foaling, care of the foals, colt's troubles and the breaking of colts. The live stock from the Demonstration Farms is used at every opportunity and the course is made as practical as possible.

(2) *Institute Meetings*.—A number of meetings have been held throughout the year at different points in the Province. As far as possible these places have been selected a considerable distance from the railroad in order that the outlying settlers may get information regarding diseases among live stock. On account of their inability to obtain the services of a qualified veterinary surgeon, settlers in outlying districts often suffer considerable loss.

Lectures and demonstrations at the Short Course Schools and Demonstration Farms are a part of the work of the Veterinary Department.

LIVE STOCK DISEASES IN THE PROVINCE.

In some of the outlying parts of the Province the cost of securing the services of a veterinary surgeon is prohibitive. The Department receives and attends to a large number of requests for assistance from such districts in controlling diseases which settlers are unable to diagnose or treat.

Some confusion was caused for a time by the people not understanding that the officials of the Live Stock Branch of the Dominion Government look after contagious diseases, such as Glanders, Tuberculosis, Hog Cholera, Rabies, Dourine and Mange, and that these diseases come under the Dominion Animal Contagious Diseases Act.

HORSES.

Typhoid Fever.—Fortunately this disease has not been so prevalent as usual during the year, possibly due to the fact that there is a decided improvement in the well settled districts in the sanitation and ventilation of stables. There have been some isolated cases, but no epizootic forms that I am aware of. There seems to be considerable doubt among the

farmers as to the cause of this trouble. It appears to be the case that animals receiving an insufficient supply of food and those kept in badly ventilated stables are predisposed to the disease to a greater extent than those that are better kept. Experience has taught us that animals compelled to breathe bad air continuously are highly susceptible to the disease, no matter how well cared for or how well fed. Under certain conditions there is no question about the contagiousness of it and where large numbers of horses are crowded together in a stable it will frequently affect the whole lot. It should be borne in mind that the symptoms vary considerably in intensity and form. We frequently find horses in one part of the Province with different symptoms from those appearing in the horses of another locality, this depending on and governed by the organ, or set of organs, most severely affected. There is no doubt but that when the country becomes better drained and when facilities for the care and general management of horses are improved the trouble will greatly lessen.

Foot Rot.—This disease has appeared in different parts of the Province this year and has caused the loss of a considerable number of horses. Like many of our other diseases in Alberta, it appears and disappears with great suddenness probably on account of seasonal conditions. It is seen most frequently in the spring, but it may appear at any time. There seems to be considerable difference of opinion as to the cause of this trouble, but all are agreed that, whether it is caused by a germ or chemical, it produces a septicemia difficult in the extreme to overcome. The symptoms also vary to a great extent and, while the animal in one case may be affected completely around the coronary band, another may be found where the spot can be covered with a twenty-five cent piece. Some of these spots are only superficial, while others affect the deeper structures, the tendons, ligaments, blood vessels and nerves. Not infrequently the hoof will drop off, and, occasionally, the whole foot will come away. A brief synopsis of the peculiarities of this disease may be summarized as follows:—

- (1) Mysterious pain at the commencement of the trouble around the hoof head.
- (2) Sloughing of the skin, either superficial or deep, between the fetlock and the coronary band.
- (3) Rapid debilitation of the animal affected.

Unfortunately the treatment of the disease has not been successful up to the present time unless taken in the very early stages and if it once gains a strong hold the animal is fortunate to recover. Those that do survive are often blemished, or suffer from ringbone, quitter or false quarter.

Swamp Fever.—Occasionally reports come to this office of this disease, but not nearly as frequently as a few years ago. The more northerly portions of the Province complain of isolated cases arising from time to time. As nothing new has been discovered in the way of isolating the germ, or in the treatment of this disease, the animal in most cases succumbs. There is considerable confusion between the symptoms of swamp fever and those of typhoid, which are similar in many cases. The former does not respond to medicinal remedies, while the latter responds fairly readily to treatment.

Infectious Abortion.—In certain localities throughout the Province this disease has given some trouble and information is frequently asked for regarding the cause and prevention of it. Unfortunately, there is no

absolutely sure prevention, but by careful isolation of the animal affected and thorough disinfection of the premises, considerable can be done to reduce the trouble. It is well to remember that many of these outbreaks originate from such sources as the purchasing at auction of mares that have come from herds that are affected with infectious abortion and the receiving into one's stable strange mares which come from an aborting herd. There is every reason to believe likewise that in many outbreaks the infection is carried either by harness, or clothing, and, not infrequently, by geldings and stallions. It should be borne in mind that in districts where the horse breeding industry is carried on extensively we can look for this trouble at any time.

CATTLE.

Blackleg.—This disease is seen almost exclusively in cattle, and judging from reports coming to this office it has been more prevalent this year than heretofore. It has been the general opinion that this trouble is seen only in the summer months, but we have been notified of outbreaks throughout the year. It has also been the supposition that this trouble is confined to young cattle, (those up to two years of age), but on more than one occasion it has been found that all ages may become affected. We have been advocating on every possible occasion the preventive inoculation against this disease and as a rule it has been widely practised, but often, through carelessness, the farmers and ranchers have neglected to vaccinate until an outbreak occurs. Immunity is established after vaccination in from 12 to 20 days, and, as the period of incubation is from 1 to 3 days, it will be readily understood how a very large death rate arises before it can be checked.

It is likewise the aim of the veterinary department to bring to the attention of the farmers the advisability and necessity of cremating the carcasses of animals dying from blackleg. There is no doubt that many outbreaks occur from birds, dogs, coyotes, and even people themselves, carrying the infection.

Weed Poisoning.—Losses from weed poisoning have been very much more frequent this year than ever before. The subject of poisonous plants is becoming of more and more importance, because, not only are the ranchers overstocking the ranges and compelling the stock to eat unpalatable plants for food, but they are also leasing and fencing the ranges for their own exclusive use, and animals are now made to pasture in areas which it was formerly their disposition to avoid. From investigation of a large number of cases of stock poisoning in the Province it appears that nearly all were due to about five species of plants, namely,—Loco, Lupine, Water Hemlock, Death Camas and Larkspur, and, while cases of poisoning by other plants may, and no doubt do occur, the number of such cases is comparatively small.

Up to the present time little has been done in the way of experimenting on these poisonous plants as regards the conditions under which the poisoning occurs, the symptoms of such poisoning and the antidotes and remedies for each. Were it possible to try out the experimental feeding of these plants to the animals themselves, noting the quantity given, the effects and symptoms resulting therefrom, both ante and post mortem, and then trying out antidotes for the different poisons, one might be able to arrive at definite conclusions.

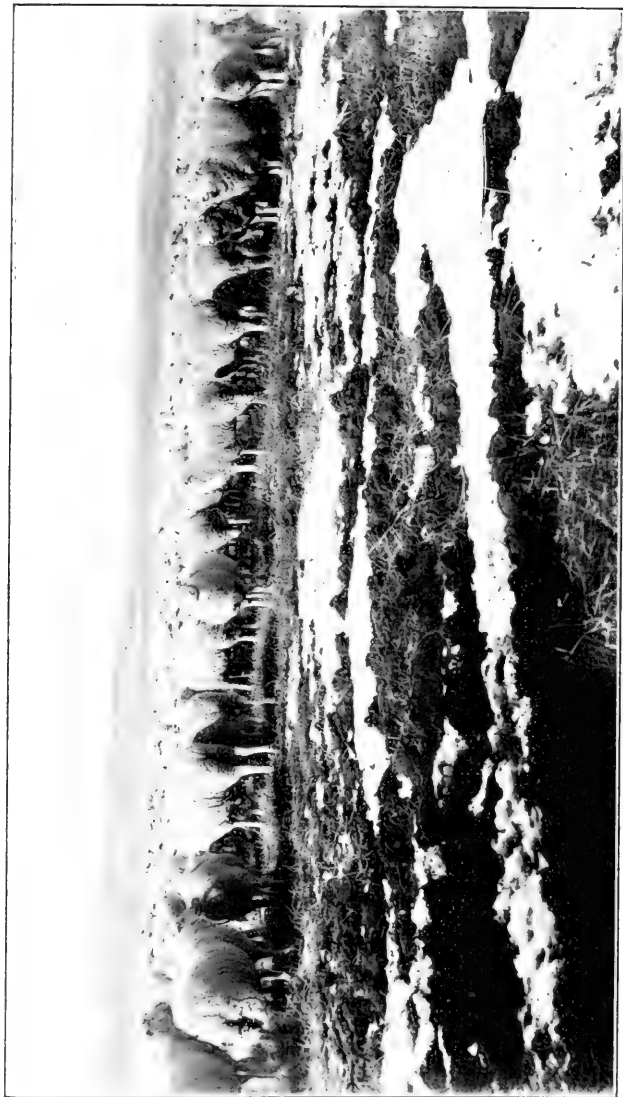
It may be pointed out that the chief period of danger in weed poisoning is in early spring, from possibly April 1st to June 15th. From data gathered we find that the Larkspur, Water Hemlock and Death Camas are more apt to be eaten at this period, the reason being no doubt that the plants are then young and tender and are possibly more poisonous before they come into bloom. Also continuous rains cause stock to seek shelter and for that reason they become less particular in the selection of forage. Late snows also cause stock to eat less edible food stuffs. Our most frequent cases follow our late spring snow storms. It should be remembered that stock accustomed to certain pastures are not so apt to be poisoned by these plants, but in trailing stock from one locality to another, or changing on to new ranges or pastures, poisoning frequently occurs. Continuous rains or snow storms, or other circumstances causing hunger, tend to the same results.

Contagious Abortion.—From the reports received at this office it would appear that this disease was more prevalent this year than formerly, but fortunately it was confined almost exclusively to dairy herds. By way of prevention of this trouble we can make no suggestions other than the isolation and thorough disinfection of the premises. The methods to be relied upon in the eradication of the trouble are the periodical spraying of the external organs and hind quarters with disinfecting solutions which will no doubt lessen the danger of contagion, the isolation of the animals as soon as the premonitory symptoms of abortion develop, the careful irrigation of the genital passages of the cow which has aborted with antiseptic solutions, the removal and cremation of the aborted foetus, abortion membranes, the infective material with which it has come in contact, and disinfection of the stables, buildings, etc., the keeping of a special bull for serving animals which have aborted and the disinfection of the external organs of the bull with antiseptic solutions after having served such a cow. Some claim to have had good results from the administration of carbolic acid, methylene blue and other antiseptics, but the best authorities claim that this is useless. Their opinion is based on the idea that owing to the enormous stomach and intestines of the cow it would be hopeless for it after being mixed with their contents to expect to destroy in this way the bacilli which have already gotten into the system.

SHEEP.

According to reports received in this department the sheep in the Province have been particularly free from disease, although there have been some flocks which have suffered severely from mistakes in feeding, care and management.

Alkali Poisoning.—Occasionally reports come to this department of stock dying from this cause, but it is limited to certain localities. We find the poisoning occurs mostly during the late summer, or in winter thaws, when the water collecting in the alkali flats is drunk by stock in need of salt. Although sheep are the most liable to this form of poisoning, cattle are occasionally affected, and in preventing this trouble care should be taken that in turning stock out on alkali ranges they should be kept away from the stagnant pools until such time as they become accustomed to this form of the salts. From the experience of shepherds and those closely associated with the sheep industry to eliminate this trouble



BAND OF STRONG RANGE SHEEP IN SOUTHERN ALBERTA

sheep must be given salt regularly. Failing to do this may result in the sheep drinking to excess of this poisonous water with disastrous results.

Death Camas Poison.—The chief period of danger in the case of Death Camas is in May and June when it is found in considerable quantities over certain poison zones and it is often eaten to excess by bands of sheep grazed in such sections. The poisoning usually occurs when the sheep are turned hungry on these poisonous belts and allowed to fill up on the Death Camas before reaching ground where grass is more abundant. They first become stiff in the legs, have trouble in walking, later show difficulty in breathing, stagger, froth at the mouth and nostrils, exhibit intermittent spasms and finally muscular paralysis and death. To prevent poisoning by this plant it is only necessary that the sheep be prevented from grazing where this plant is abundant, particularly during May and June. The localities where the plants are found should be noted and avoided during these two months.

A brief summary of the other poisonous plants affecting sheep and their symptoms follows:—

Water Hemlock usually occurs in early spring, but occasionally affects sheep in winter time from eating slough hay. The symptoms will be convulsions, frothing at the nose and mouth, excessive urination, coma and death.

Larkspur usually occurs in May and June, and generally a very few are affected at once. The effect of the poison is shown by twitching of the muscles, stiffness of gait, occasional bloat and convulsions.

Loco Poisoning is slow, rendering the animal stupid, inclined to wander from the herd, and usually young lambs and yearlings are affected. Fortunately we have very few cases of this poisoning in Alberta. It occurs occasionally in the foothills of the Rocky Mountains.

SWINE.

Diseases of hogs in the Province are not common, other than those met with when the animals are kept under unsanitary conditions, such as pneumonia, bronchitis, pleurisy and rheumatism, also such conditions brought about by mistakes in feeding, as gastritis, chronic indigestion and poisoning by the various forms of chemical irritants carried in with the food. Occasionally reports of suspected cases of hog cholera are forwarded to this office, but as this disease is a contagious one notice is immediately forwarded to the Dominion Veterinary Inspectors, as those diseases classified as contagious come under their jurisdiction.

Respectfully submitted,

P. R. TALBOT,

Provincial Veterinarian.

LIVE STOCK COMMISSIONER'S REPORT FOR YEAR 1915

GENERAL REMARKS.

Live stock conditions during the year 1915 were generally good, though not uniformly so. Some branches, notably the growing of hogs and the finishing of sheep and steers, were adversely affected by the drought of 1914. The horse industry was adversely affected at the marketing end because of the general stagnation of business in the towns and cities, the cessation of railway construction and the limited purchasing power of the grain farmers. On the other hand, interest in the growing of sheep has been very much stimulated by the high prices of wool resulting from the war, and because it is beginning to be understood by the growers of grain that sheep can be made to serve a useful purpose in weed eradication.



GROUP OF USEFUL ALBERTA HORSE STOCK.

HORSES.

Conditions surrounding the raising of these animals were generally good. As previously stated, markets were unsatisfactory. The year opened with prices fully 40 per cent. below those prevailing three years ago. Prices had declined to a point where farmers and ranchers began to lose interest in the business. The demand for stallions fell off materially and a feeling of stagnation was becoming apparent.

In June the Dominion Government sent buyers of war horses to the Province, and in September buyers for the Imperial Government, under Lord Orkney, arrived. The animals purchased by the Dominion and Imperial Governments were in the main transport and artillery horses. In October buyers for the French Government arrived in the Province. They were desirous of securing cavalry horses in particular, although they took a number of light and heavy artillery horses as well. The standards of the French were not as high as those of the Canadian and British buyers, and the prices they paid were correspondingly lower. The number of war horses secured by the three governments in Alberta was about 4,000 head.

What promises to be the most important horse buying campaign of the year started in December and continued to assume larger proportions to the end of the year. This is the heavy demand by the farmers of

Saskatchewan for agricultural horses. These farmers have just harvested a phenomenal crop of grain, but the labor incident to harvesting and threshing it prevented them from doing any fall plowing. To compensate for this it was apparent to the grain growers of that province that more power would be necessary in order to do the work that will have to be done next spring.

STALLION ENROLMENT.

There were enrolled during the year 202 pure bred and 195 grade stallions. The pure bred are classified as follows:

Clydesdale	95
Percheron	71
Shire	17
Suffolk	1
Belgian	4
Thoroughbred	2
Standardbred	11
Hackney	1

CATTLE.

Interest in the cattle industry continues on the increase. This fact is evidenced by the large number of inquiries arriving at this office for foundation stock, by the large number of bulls disposed of at the bull sales, and the high prices obtained for them, and by the small percentage of calves and heifers slaughtered during 1915 as compared with previous years.

BULL SALES.

There were three bull sales during the year that were held by the live stock associations of the Province.

SALE AT EDMONTON.

This sale was put on by the Alberta Provincial Live Stock Association, Limited. It was held on April 15th, 1915. Following is a statement of the number of animals sold and the price obtained as compared with 1914.

1915		1914	
<i>Number Sold</i>	<i>Average Price</i>	<i>No. Sold</i>	<i>Average Price</i>
13 Shorthorns	\$136.92	11	\$142.72
2 Herefords	192.50	..	.....
4 Aberdeen-Angus	123.75	..	.....
3 Ayrshires	90.00	1	60.00
1 Red Polled	90.00	..	.....
.. Jerseys .....	.....	3	105.00
.. Holsteins .....	.....	3	138.34

SALE AT CALGARY.

This sale was put on by the Alberta Live Stock Associations. It was held on April 22nd, 1915.

Following is a statement of animals sold and the average price secured.

<i>Number Sold,</i>	<i>Average Price.</i>
213 Shorthorns	\$146.38
86 Herefords	196.01
30 Aberdeen-Angus	154.50
6 Holsteins	78.33
1 Ayrshire	60.00

The above prices were secured in 1915 in the face of the fact that there were three carloads of bulls in the city that had been brought up from the east and were being offered at private sale.



GRAND CHAMPION SHORTHORN TULL AT CALGARY SPRING SALE, 1906

SALE AT LACOMBE.

This sale was put on by the Alberta Live Stock Associations. It was held on June 2nd, 1915.

Following is a statement of animals sold and the average price secured:

<i>Number Sold.</i>	<i>Average Price.</i>
46 Shorthorns	\$172.60
9 Herefords	136.66
14 Aberdeen-Angus	122.14
2 Ayrshires	57.50
2 Holsteins	70.00

LIVE STOCK LEGISLATION.

The legislation of the year 1915 having relation to live stock concerns the dealing with stray and mischievous animals and to the extension of the application of the Stock Inspection Act to horses and cattle sold by public auction and by private sale at livery and sales stables, etc. The operation of these Acts has indicated the advantage and necessity of certain extensions and definitions or slight modifications in the Acts in certain cases.

Under the various Acts administered by this Branch, I beg to report the following:

STOCK INSPECTION ACT.

Inasmuch as a new Act came into effect on July 1st, 1915, there was some difficulty in getting all of the inspectors to understand and conform to its requirements.

Animals reported under the heading of "local shipments" indicate the number that were shipped to points within the Province prior to July 1st. No inspection is required under the new Act for such shipments, consequently no record was kept of them after that date. If they were slaughtered, they appear under the Butchers and Hide Dealers' reports.

Following is a statement of animals inspected for shipment:

Animals Shipped Out of the Province.

Horses	16,176 head.
Cattle	23,412 head.

That portion of the Stock Inspection Act requiring monthly reports from butchers and dealers in hides did not become effective until July 1st. Some difficulty was experienced in securing proper reports, and in some instances dealers did not secure, at the time of purchasing, the memoranda required by the Act, therefore the figures are more or less incomplete up to September 1st.

From July 1st to December 31st the figures are as follows:

Total hides bought from July 1st to December 31st, inclusive of both dates, 54,465.

These are classified as follows:

Horse Hides	134
Beef Hides	54,331

The beef hides are classified as follows:

Males	Mature	31,723	Calves	4,151
Females	Mature	16,988	Calves	1,469

The steers constituted 58.38 per cent. of the animals slaughtered in the Province, the cows and heifers, 31.26 per cent. and the calves, 10.36 per cent.

From the foregoing it will be seen that the percentage of calves and females going to slaughter is not large, and that when market conditions are right farmers will not sacrifice animals of these classes.



THE FIRST PURE-BRED KARAKUL LAMBS BORN IN ALBERTA.

SHEEP.

Interest in this class of animal continues on the increase, one cause being the high prices paid for wool and mutton, another, the improved facilities for securing pasturage, growing out of the fact that in many municipalities in which pound by-laws have been adopted there are large areas of unenclosed land held by speculators. As the pound by-law prohibits animals from running at large, and as few stockmen think that it pays to herd horses or cattle, these disappear, and bands of sheep, which are always accompanied by a herder, take their places and derive the benefit of the pasturage thus made available.

WINTERING.

Most bands were brought through the winter of 1914-1915 with a small loss. The percentage of lambs saved in the spring of 1915 was not so good, and was considerably below that of the previous year. The rancher whose lamb crop numbered within 90 per cent. of the number of his ewe flock did well. Many fell below 80 per cent., and a few below 70 per cent. It is doubtful if, on the range, the lamb crop averaged more than 85 per cent. of the ewes.

On the farms a higher percentage of lambs was saved than on the range, owing to the greater individual attention given them and the better facilities for saving orphaned ones. But even among farm flocks fewer twins were observable than formerly, and it is doubtful if the lambs numbered in the aggregate more than 100 per cent of the ewes.

The Sheep Trailing Act appears to have given the farmers the protection they asked for against careless herdsmen who permitted their animals to enter grain fields and graze while being driven from one part of the Province to another. An instance is worthy of mention, namely that of Mr. Ray Knight, who trailed 14,000 head from the Lethbridge

district to Provost, a distance of approximately 300 miles, yet there was not one complaint sent to the Department on account of trespass or damage done on the way.

The prices paid for mutton and lamb, as shown by the market quotations issued by the commission firms operating at the Alberta Stock Yards, Calgary, were as follows:

1915.

Average Price per Cwt.

	Mutton	Lamb
January	\$6.50	\$6.80
February	7.00	8.00
March	7.00	8.00
April	7.75	8.00
May	7.80	8.20
June	7.00	9.00
July	6.87	8.00
August	6.85	7.81 $\frac{1}{4}$
September	6.87	7.87 $\frac{1}{2}$
October	7.00	7.80
November	7.00	7.62 $\frac{1}{2}$
December	7.70	8.05

Prices for breeding ewes have reached the highest yet known in the Province. Fair range-bred ewes sold as high as \$1.00 per head; good range-bred ewes brought in many cases \$9.00 per head; and good farm-bred ewes showing a large percentage of Down blood sold as high as \$15.00 per head.

The bulletin issued by the Department in 1915, entitled "Sheep in Alberta," written by J. McCaig, has been well received by the wool growers of the Province, and many complimentary references have been made to it by the press, by correspondents, and by individuals in personal conversation.

NEW BREEDS INTRODUCED.

The year 1915 marks the beginning of what promises to be some notable departures in the sheep industry in the Province, namely, the introduction of the Karakule and Romney Marsh breeds of sheep.

In the autumn of 1914 a company was organized for the purpose of engaging in the business of raising Karakule sheep. The name of the company is The Alberta Karakule Sheep and Fur Company, Limited, and their headquarters are twelve miles north-east of Calgary. The original stock consisted of five pure-bred rams, six pure-bred ewes, forty-nine half-blood ewes, one hundred and thirty long woolled ewes, consisting of Lincolns, Cotswolds, Leicesters and Border Leicesters. The first pure-bred Karakule lambs were dropped in January, 1915. Between January 8th and May 1st, 1915, thirty-four lambs in all were dropped, and thirty-three were saved. There were no twins among the pure-bloods; there were four twins among the half-bloods.

For a number of years reports have been received concerning the excellent results obtained in Australia, New Zealand and the Argentine, by crossing Merino range ewes with Romney Marsh rams. In the autumn of 1915 Mr. R. C. Harvey, of Raymond, purchased from Mr. Wm. Riddle, Jr., of Monmouth, Ore., eighteen American bred Romney ewes, seventeen American bred rams, and one New Zealand bred ram. The Romney Marsh are large sheep approaching the Lincoln in size and likewise in appearance but are rather lower down. They are full bodied, sturdy,

strong boned sheep with long fleece rather finer in fibre than the Lincoln. The excellent quality of wool and adaptability to rather close herding commend them for crossing on the range sheep.



IMPORTED NEW ZEALAND ROMNEY MARSH RAM ON THE HARVEY RANCH,
RAYMOND

On October 5th, 1915, the first Association ram sale held in Alberta took place at Lacombe, under the auspices of the Lacombe Wool Growers' Association.

At this sale forty animals were sold. They were classed as follows:

Number of pure-bred rams sold	17
Average price per head	\$29.00
Number of grade rams sold	23
Average price per head	\$13.00

There were four co-operative wool sales held in the Province during the year under the auspices of various associations, at which the number of pounds of wool sold and the prices realized were as follows:

EDMONTON SALE.—Held by the Alberta Provincial Sheep Breeders' Association, W. J. Stark, Secretary.

Number of pounds of wool sold	13,663
Average price per pound	27.27c

CALGARY SALE.—Held by the Alberta Sheep Breeders' Association, E. L. Richardson, Secretary.

Number of pounds of wool sold	95,490
Average price per pound	27.77c

LACOMBE SALE.—Held by The Lacombe Wool Growers' Association, T. F. Roberts, Secretary.

Number of pounds of wool sold	24,000
Average price per pound	27c

VERMILION SALE.—Held by the Vermilion Sheep Breeders' Association, H. W. Scott, Secretary.

Number of pounds of wool sold	29,600
Average price per pound	27c

SWINE.

The opening of the year 1915 found the swine industry in a very demoralized condition. This demoralization began with the drought of 1914 and continued into 1915 until prices began to advance because of the eastern demand and also because a large grain crop was practically assured.

During January and February a common sight at the abattoirs and stock yards was a carload of hogs consisting of ten or twelve brood sows, a stag and seventy or eighty pigs weighing less than one hundred pounds each. These told the tale of shortness of feed, and of the sacrificing of foundation stock. It also foretold high priced hogs and comparatively low priced grain a year later. As the season advanced and the supplies coming forward originated largely in districts that were not affected by the drought, the quality began to improve, until during the autumn from 90 to 95 per cent. of those coming forward were classed as selects.

The number of hogs marketed in the Province during the year was about 100,000 head.

There was little demand from American points for Alberta hogs. The eastern Canadian demand continued strong, and Alberta hogs are much sought for by eastern packers. The percentage of cripples and dead ones is exceedingly small when the long journey is taken into consideration. In many instances they amount to less than one-half of one per cent. This small percentage is accounted for by the fact that most Alberta hogs are field grown, and have developed stronger bone and greater activity than those grown and finished in pens.

Following is the average top price paid at the Alberta Stock Yards, Calgary, for select hogs in each month during the year:

January	\$6.75
February	6.93 ³ / ₄
March	7.27 ¹ / ₂
April	8.00
May	8.30
June	8.33 ³ / ₄
July	8.01
August	7.90
September	8.96 ¹ / ₄
October	8.95
November	8.23 ³ / ₄
December	8.63 2-5

STRAY ANIMALS ORDINANCE.

Under this Ordinance 908 animals were reported as estrays during the year. They were dealt with as follows:

HORSES.

Number Reported	436 head.	
Number Sold	96 head.	
Number Claimed	340 head.	
Amount Forwarded to the Department from Sale of Estrays		\$3,770.89
Number of Refunds Allowed	11	
Amount Refunded		689.36

CATTLE.

Number Reported	361 head.	
Number Sold	49 head.	
Number Claimed	312 head.	
Amount Forwarded to the Department from Sale of Estrays		\$1,260.88
Number Refunds Allowed	3	
Amount Refunded		54.93

SHEEP AND SWINE.

Five sheep and one hundred and six swine were reported and advertised but owing to the fact that there is now no provision in the Ordinance for the sale of these animals, the finders were, on instructions to that effect from the Attorney General's Department, advised that if no one claimed them, they would have to be dealt with under the common law rule.

POUND DISTRICT ORDINANCE.

Number of Pound Districts Organized during 1915	12	
Number of Pound Districts Disorganized during 1915.....	..	
Number of Pound Keepers Appointed	29	
Number of Animals Advertised as Impounded	333	
Number of Animals Sold	10	
Amounts Forwarded to the Department		\$195.61
Number of Refunds Made		
Amount Refunded		

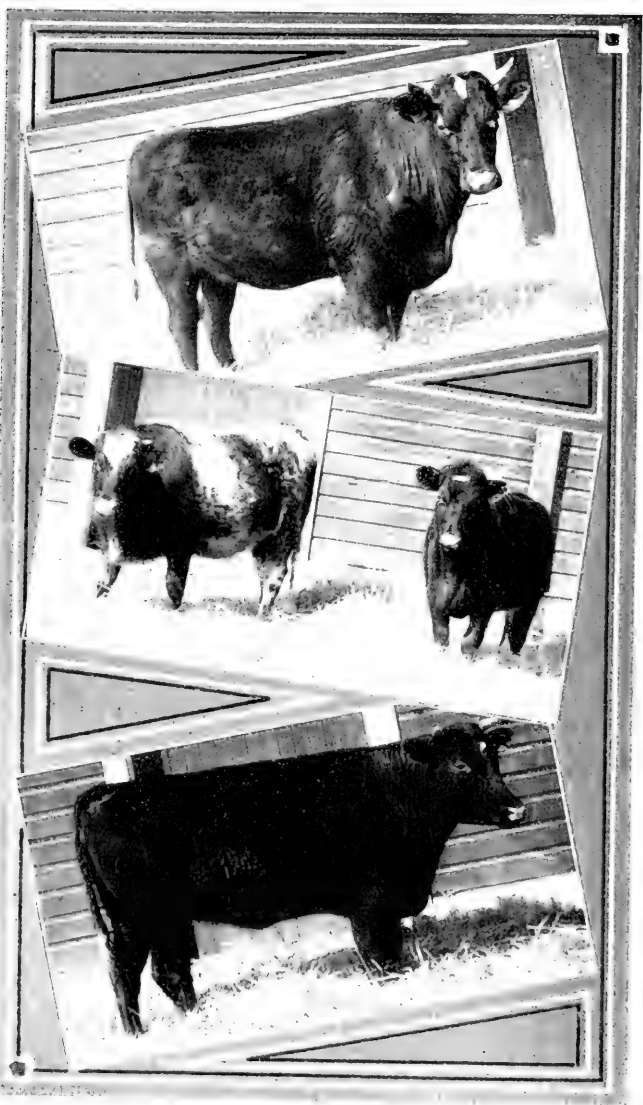
ENTIRE ANIMALS.

HORSES.

Number Reported and Advertised	24	
Number Sold	4	
Amount Forwarded to the Department		\$58.80
Number of Refunds		
Amount Refunded		

CATTLE.

Number Reported and Advertised	30	
Number Sold	2	
Amount Forwarded to the Department		\$10.65
Number of Refunds		
Amount Refunded		



DUAL PURPOSE SHORTHORN HIPPIERS BRED ON THE SEDGWICK
DEMONSTRATION FARM

SALES OF IMPOUNDED ANIMALS UNDER THE POUND DISTRICT ORDINANCE FROM JANUARY 1st TO DECEMBER 31st, 1915.

Poundkeeper	Address	CLASS OF ANIMAL	Date of Impoundment	First Gazette Notice	Date of Sale	Pro'ds of Sale	Sent to Dept.
Granlin, O. J.	Stavely	One bay horse, weight 1000 lbs., black mane and tail, collar marks on both shoulders, small white spot on face, branded W— over same reversed on left shoulder.	June 11, 1f	June 31, 1f	Sept. 8, 15	\$25.00	\$13.25
Caldwell, D. H.	Cardston	One brown work mare, branded 3, — (over) Z L on left thigh.	Aug. 8, 15	Sept. 1, 1f	Oct. 12, 15	87.50	49.68
Crooks, Thos.	Redcliffe	One buckskin horse, black stripe down back, black tail, both hind feet white, wire scar on left front leg, weight about 1300 lbs., branded cross over G over H reversed R on left shoulder and on right hip, G 1	Aug. 23, 1f	Oct. 15, 1f	Nov. 8, 15	38.00	12.72
Dawkins, W.	Strathmore	One red and white cow, aged, branded Z (monogram) O on left ribs	Oct. 1, 1f	Oct. 30, 15	Nov. 15, 15	25.00	.....
Carter, W. S.	Camrose	One bay gelding, white star on forehead, weight about 900 or 950 lbs., branded inverted L over S on right shoulder	Oct. 22, 1f	Nov. 1, 15	Nov. 25, 15	28.50	15.10
Tawson, W. H.	Coaldale	One black stallion, both hind feet and left front foot white, small star in face, 2 years old, no visible brand	Jan. 26, 1f	Mar. 31, 1f	Apr. 23, 15	32.50	.....
Zeh, Clark	Taber	One 4 year old roan stallion, weight 1000 lbs., gentle, saddle marks, branded lazy B over lazy E on right thigh	May 5, 15	May 31, 1f	July 3, 15	39.00	13.40
Card, Geo. C.	Magrath	One bay stallion, white spot in forehead, both hind feet white, 3 years old, blotched brand on right shoulder.	May 21, 1f	June 15, 1f	July 28, 15	49.00	22.45
Keys, Wm.	Retlaw	One bay gelding, 5 years old, weight 900 lbs., branded reversed inverted F B on right shoulder	July 15, 1f	July 31, 15	Aug. 27, 15	79.00	52.00
Chamberlains, John	Avallon	One brown mare, crooked left hind leg, weight 1000 lbs., branded 4 lazy Y (connected) over same on right shoulder, — over 15 on left shoulder, lazy 4 over 100 on left thigh	Aug. 26, 15	Sept. 15, 1f	Oct. 11, 15	40.00	27.00

BRAND READERS IN ALBERTA.

Elias Pilling	Leavitt
R. A. Pilling	Cardston
Arthur Scheer	Macleod
Peter Vandervoort	Granum
Alfred S. Hunter	Claresholm
Henry Frey	Barons
J. O. Roberts	Sufield
Wm. R. Brodie	Empress
William Thiel	Gahern
Fergus Oliver	Hussar
C. J. Christianson	Hutton
T. Boulton	Blacktail
Geo. Todd	Vulcan
Wm. Robertson	Nanton
E. J. Thorne	Aldersyde
Arthur R. Bond	Eastway
Horace Layton	Brant
Fred Rockefeller	Blackie
George Findlay	Tongue Creek
Jas. S. Parker	Mountain View
George Scott	Okotoks
G. M. Mortimer	Cochrane
A. Howard	Cochrane
Geo. McLeod	Crossfield
John Lennon	Crossfield
H. G. Newcomb	Calgary
S. Savage	Mecheche
E. C. Watts	Namaka
John Martin	Rosebud Creek
Duncan Clark	Cluny
Mike Brown	Gleichen
T. S. McSpadden	Sunnyslope
H. N. McNaughton	Carbon
Norman Cook	Acme
W. K. Evans	Three Hills
Hugh Ross	Harmattan
S. C. Brace	Carstairs
Wm. Niddrie	Mound
John A. Swanson	Trochu
E. G. Shenfield	Bowden
D. K. McArthur	Trochu
Thomas Moore	Trochu
C. O. Herron	Mayton
Luskey Berkley	Murray Valley
Fred J. Niddrie	Mound
Harold Fear	Rocky Mountain House
Wesley F. Wood	Perbeck
J. P. McBeth	Dorothy
Robert Lamont	Sunny Nook
W. O. Stephenson	Richdale
Alex. McDonald	Scollard
J. R. Kennedy	Erskine
Henry Brace	Britain
Oliver Gibbon	Botha
W. K. Taylor	Halkirk
Fred R. Mason	Delia
J. J. Miller	Lawsonburg
Hilton Sargent	Hartshorn
Bert. Uttley	Gopher Head
Frank Kirkham	Nevis
Sidney Cornish	Rowley
G. L. Stickney	Morrin
S. O. Backness	Craigmyle
W. C. King	Munson
E. N. McDuffie	Hutton
Geo. R. Cope	Hanna

G. F. Sturrenburg	Consort
Oscar B. Murdoch	Munson
Frank Porter	Leo
C. L. Rawleigh	McNally
Edward B. Keegan	Earlstone
Walter Sharp	Sedgewick
Chas. D. Brownfield	Brownfield
O. A. Hastings	Hastings Coulee
C. H. Schneider	Flagstaff
R. G. Lyster	Bonlea
Raymond Gutowski	Battle Bend
James Whitelock	Puffer
Walter Whitelock	Czar
E. G. Symington	Provost
C. A. Hogan	Galahad
J. S. Reynolds	Cereal
Oscar Carlson	Curlew
Thos. Helmbolt	Coronation
Fred B. Davis	Veteran
A. F. Manley	Hanna
A. J. Thompson	Consort
Simon Bullington	Castor
L. K. Cranmer	Cranmer
E. Elliott	Killam
J. H. Roberts	Sullivan Lake
Roy C. Coates	Talbot
Albert Billingham	Talbot
B. Lee Wilson	Monitor
M. R. Coates	Seal
Ernest Every	Youngstown
Thos. Barker	Cereal
H. J. Loree	Wastina
Stanley C. Barker	Kinsella
Albert Firkus	Jarrow
H. McArthur	Garden Plain
Hugh H. Forster	Nateby
J. E. Thompson	Kinmundy
R. S. Grasset	Gold Spring
Harry Male	Chilmark
R. Davidson	Raven
F. J. Thompson	Innisfail
Robert Milligan	Pine Lake
Thos. Sigurdson	Burnt Lake
N. W. Goodwin	Perbeck
L. S. McKenzie	Lousana
Percy Kneeshaw	Delburne
A. N. McKinnon	Leslieville
W. C. Petro	Sylvan Lake
A. J. Leslie	Lacombe
Marshall Douglas	Lacombe
R. T. Attwood	Blackfalds
Horace Hickling	Alix
Geo. A. Wells	Whitebrush
Clarence Dameron	Bentley
O. M. Gilbertson	Gilby
James Tees	Valley City
W. D. Cook	Mirror
Jas. J. Cairns	Mirror
W. R. Winslow	Lacombe
P. R. Stuart	Earlville
J. W. Donovan	Nugent
C. Kirk	Bismark
Charles Tate	Waterglen
C. L. Farnum	Ponoka
N. A. Donaldson	Manfred
Samuel Doran	Ponoka
Perry S. Bunch	New Norway
Geo. A. Myers	New Norway

J. D. Cowan	Wetaskiwin
Kenneth Heacock	Battle Lake
Harvey T. Riggan	Mulhurst
Philip E. Peterson	Malmo
Colonel Denton	Bittern Lake
S. H. Johnson	Beaumont
J. A. Sangster	Conjuring Creek
John W. West	Millet
John A. Burke	Ferry Point
Perry Hubbell	Donalds
A. J. Hill	Daysland
Fred Anderson	Meeting Creek
Jos. J. Martz	Duhamel
Jas. Kennedy	Bawlf
C. I. Bijorge	Ferry Point
C. Nixon	Bashaw
H. Kibbe	Meeting Creek
D. A. Hart	Ohaton
Clifford Wilson	Camrose
Wm. M. Ross	Round Hill
Jacob Welda	Hay Lakes
Henry Espeter	Spring Coulee
E. G. Doolittle	Dorenlee
Guy Hitchcock	Bawlf
E. I. Button	Innisfree
Blair McGregor	Wildmere
Jas. T. Brady	Mannville
John L. Brady	Zoldovara
Chas. Ruzicka	Kinsella
Richard Cronin	Falun
Geo. Hubbard	Lavoy
P. P. Kjosness	Ryley
P. Bolan	Whitford
A. Watson	Chipman
S. A. Richardson	Vegreville
H. J. Frederick	Bruce
D. J. McCallum	Mundare
Norman S. Smith	Tofield
Donald Eaton	Mundaro
T. J. Rogness	Kingman
John McDonald	Ranfurly
R. H. Bradley	Edson
A. C. Smith	Wabamun
Stanley Richmond	Mosside
Thos. Littlefair	Mosside
L. L. Smith	Isle Lake
P. S. Gaudette	Morinville
Geo. Mulligan	Bon Accord
G. W. Davis	Fort Saskatchewan
Walter Dinwoodie	Wahstao
J. W. Brown	Wainwright
Harry Smith	Grande Prairie
Frank E. Rooney	Waterhole

SALES OF ESTRAY ANIMALS UNDER THE STRAY ANIMALS ORDINANCE

Justice	Address	CLASS OF ANIMAL	Date of Capture	First Gazette Notice	Date of Sale	Pro'ds of Sale	Sent to Dept.
Adley, C. E.	Sedgewick	One chestnut mare, face and feet white, blocky built weight 1000 lbs., 5 years old, branded 171 on right thigh	Nov.	15, 14 Dec.	1, 15 Mar.	1, 15, \$80.00	\$58.80
Alton, Jos	Lamont	One two year old red and white heifer, blind in right eye, no visible brand	Oct.	19, 12 Jan.	30, 15 Mar.	16, 15, 21.00	7.60
Ainslie, M.	Irma	One chestnut mare, white strip on face, one white hind foot, branded 8 on left hind leg, 64 on left shoulder, and half diamond over A or half diamond over the same on left hip.	Dec.	5, 14 Dec.	15, 14 Apr.	10, 15, 90.00	70.75
"	"	One dark bay mare, two white hind feet, white spot on forehead, weight 1200 lbs., four years old, no visible brand	Aug.	30, 14 Mar.	15, 15 May	22, 15, 100.00	78.40
"	"	One black gelding, about 7 years old, weight about 1350 lbs., no visible brand.	June	20, 15 Aug.	31, 15 Dec.	12, 15, 126.00	108.01
Anderson, Jas	Czar	One red yearling steer, left ear frozen or cut off, no visible brand	Jan.	14, 15 Jan.	30, 15 May	3, 15, 17.00	1.95
Barnett, R. E.	Athabasca	One bay gelding, small white spot on face, one white foot, weight 1000 lbs., branded X N on right thigh	June	15, 14 Aug.	31, 14 Feb.	23, 15, 19.00	4.60
"	"	One bay yearling Clydesdale, white face, three white feet, no visible brand	June	15, 14 Aug.	31, 14 Feb.	23, 15, 18.00	3.65
"	"	One small sorrel or chestnut gelding, weight 800 lbs., no visible brand	June	15, 14 Aug.	31, 14 Feb.	23, 15, 21.00	6.50
Bell, G. W.	Meadow Creek	One roan Shorthorn cow, about 12 years, branded on left shoulder lazy 8 with bar through it over bar and on left hip M over half diamond	Nov.	1914 Sept.	15, 15 Oct.	26, 15, 60.00	50.00
Brockman, E. A.	Phillips	One red steer calf, white spot on back, no visible brand	Jan	7, 15 Jan.	15, 15 Apr.	9, 15, 12.00	.....
Buold, T. H.	Carstairs	One grey mare, weight 900 lbs., very lame in left forelock, no brands	Nov.	1, 14 Dec.	1, 14 July	5, 15, 49.00	22.55
Burnard, F. W.	Trochu	One 5 year old black gelding, white strip on forehead, white inside left hind leg, weight 1100 lbs., branded B on left thigh	Feb.	9, 15 Feb.	27, 15 Apr.	21, 15, 35.00	13.69
Bought, C. H.	Mundare	One black mare, spot on forehead, weight 1200 lbs., no visible brand	Jan.	1, 15 Jan.	30, 15 Apr.	27, 15, 40.00	18.45
"	"	One bay gelding, white strip on face, white hind feet white spot on back, weight 850 lbs., 8 years old, no visible brand	Feb.	27, 15 Mar.	15, 15 May	15, 15, 36.75	18.47
"	"	One bay mare, two white hind feet, 8 years old, no visible brand, also one spring coat	Nov.	1914 Feb.	15, 15 June	1, 15, 50.00	28.20
Burges, Jas. A.	Jackville	One brown, 3 year old Clyde mare, both hind feet white up to the hock, an indistinguishable brand on left shoulder, rather wild	Dec.	12, 14 Dec.	31, 14 Apr.	27, 15, 58.00	38.00
Brown, J. B.	Harmattan	One dark sorrel gelding, small white strip on face, some white on both hind feet, weight 1100 lbs., 8 years old, branded on right shoulder R over Y	Feb.	25, 14 Feb.	28, 14 June	18, 15, 38.50	22.07

SALES OF STRAY ANIMALS UNDER THE STRAY ANIMALS ORDINANCE. (Continued)

Justice	Address	CLASS OF ANIMAL	Date of Capture	First Gazette Notice	Date of Sale	Prods. Sent to lot Sale, dept.
Powerman, S. B.	Wainwright	One bay gelding, white star, left hind foot white, 10 years old, weight 1050 lbs., branded 23 H on left jaw, inverted C on left shoulder, and reverse C on left thigh	Mar. 15, 15 June	30, 15 June	6, 15 Aug.	\$75.00
Rowles, O. W.	"	One bay gelding, branded I reversed C on left thigh on forehead, branded I reversed C on left thigh	Mar. 15, 15 Mar.	18, 15 June	26, 15 June	\$36.00
Blair, James	Gramm	One Jenny mule, slit in left ear, long tail, straggling mane, about 5 years old, branded lazy C over S on left shoulder	June 12, 15 June	18, 15 June	26, 15 June	28.00
Feudry, Frank	Morinville	One bay horse, both hind feet white, one front foot white, weight about 1400 lbs., aged 12 years, a little sore in front, no visible brand	June 16, 15 Aug.	29, 15 Nov.	25, 15 Nov.	43.00
Campbell, Fred	Ferry Point	One dark bay mare, white spot on forehead, white strip on nose, weight 1000 lbs., branded B on left thigh	Dec. 1, 14 Jan.	15, 15 Apr.	7, 15 Apr.	65.00
"	"	One red steer, white face, one year old, white under belly, branded Y H under angling bar on left hip	Dec. 1, 14 Jan.	30, 15 May	1, 15 May	22.50
Coutts, George	Pandora	One buckskin pony mare and yearling filly, mare has white spots on nose, black points, branded 44 on right hip and monogram R bar under, book lazy 7 and monogram 4 inverted lazy P on left hip and O A below on right shoulder	Oct. 13, 14 Oct.	15, 14 Feb.	12, 15 Feb.	30.00
Clarkson, J. W.	Sutfield	One black mare, 8 years old, small white dot on forehead, 2 white hind feet, weight 950 lbs., branded on left stifle A, also indistinct brand on right stifle	Oct. 2, 14 Oct.	15, 14 Jan.	25, 15 Jan.	25.00
"	"	One bay gelding, weight 1050 lbs., 14 years old, branded cross in a diamond on right hip	Sept. 2, 14 Oct.	15, 14 Feb.	10, 15 Feb.	57.00
Campbell, A. J.	Debs.	One aged bay gelding, no visible brand	July 2, 15 July	31, 15 Nov.	13, 15 Nov.	14.00
Cornville, C. J.	Camrose	One red steer, with little white under belly, dark grey tassled on tail, wide between horns, no visible brand	June 20, 14 Jan.	15, 15 May	30, 15 May	22.00
Caldwell, W. H.	Hill Spring	One roan mooley cow, 6 years old, branded half of a heart over A on left hip	Oct. 1914, Mar.	31, 15 June	12, 15 June	71.00
Davie, J. D.	Crossfield	One four year old red and white roan steer, dehorned, branded arrow head T E over quarter circle over bar on right ribs	Nov. 14, 14 Nov.	30, 14 Feb.	13, 15 Feb.	48.00
"	"	One aged strawberry roan pony mare, some white on face, white hind feet, branded J I on left shoulder	Jan. 1, 15 Feb.	27, 15 July	3, 15 July	18.00
"	"	One iron grey mare, 2 years old, white around top of left hind foot, 2 years old, no visible brand	Dec. 25, 14 Feb.	15, 15 July	3, 15 July	20.00
Davidson, D.	Daysland	One light buckskin mare, white strip on face, right hind foot white, dark strip along back, weight 1050 lbs., 4 years old, no visible brands	June 17, 14 Feb.	27, 15 Apr.	15, 15 Apr.	120.00

SALES OF ESTRAY ANIMALS UNDER THE STRAY ANIMALS ORDINANCE. (Continued.)

Justice	Address	CLASS OF ANIMAL	Date of Capture	First Gazette Notice	Date of Sale	Pro'ds Sent to Dept.	Pro'ds of Sale
Hartman, L. L.	Tolds	One aged brown mare, weight 1000 lbs., branded N A (monogram connected), Z over bar on left thigh and N A (monogram connected) on left shoulder	July	14, 14 Nov.	30, 14 Dec.	31, 15	\$ 22.00 \$ 4.40
Johnston, Chas. A.	Howden	One chestnut mare, small strip on face, branded reversed D over V on left shoulder	Dec.	1, 14 Dec.	15, 14 Mar.	13, 15	84.00 63.25
Jones, G. H. G.	Ranfurly	One black and white Holstein steer, no visible brand	Jan.	25, 15 Feb.	15, 15 Apr.	6, 15	24.00 4.45
Jessup, Aaron Z.	Nanton	One bay gelding, white star on forehead, weight 1350 lbs., 10 years old, branded T U over the same on left shoulder	Apr	15, 15 July	15, 15 Oct.	23, 15	85.00 65.10
"	"	One brindle heifer, 3 years old, no visible brand	Apr.	15, 15 Sept.	30, 15 Dec.	9, 15	29.00 12.90
"	"	One brindle cow and her two calves, cow has white strip on back, branded bar on right ribs. One calf is a yearling and the other a sucking calf, no brand on the calves	Nov.	1912 May	31, 15 Oct.	30, 15	184.00 123.55
"	"	One bay gelding, weight about 1200 lbs., branded lazy E B on right thigh	Dec.	1912 May	31, 15 Oct.	30, 15	60.00 43.05
Long, J. H.	Nanau	One black horse, star on forehead, small white spot on right hind leg, no visible brand	Mar.	14, 14 Sept.	30, 14 Jan.	8, 15	20.00 3.30
"	"	One black horse, star on forehead, two white forefeet, also one white hind foot, weight 1400 lbs., no visible brand	Mar.	14, 14 Sept.	30, 14 Jan.	8, 15	30.00 12.80
Lambert, C. W. R.	Strathmore	One dapple-grey, flea bitten horse, weight about 800 lbs., branded A I on left shoulder and on left thigh	Dec.	20, 14 Aug.	30, 15 Dec.	8, 15	55.00 39.58
Mahaffy, Frank	Tofield	One brown mare, 3 years old, weight 900 lbs., star on face, white hind feet, no visible brand	Oct.	14, 14 Nov.	30, 14 Jan.	30, 15	73.00 53.95
"	"	One sorrel gelding, 3 yrs. old, weight 900 lbs., white spot on right side, silver mane and tail, no visible brand	Nov.	14, 14 Nov.	30, 14 Jan.	30, 15	54.00 37.20
"	"	One iron grey mare, 4 years old, white spot on tip of nose, both left feet white, no visible brand	Nov.	14, 14 Nov.	30, 14 Jan.	30, 15	72.00 53.00
Mcennie, Robt. H.	Andrew	One red 3 year old steer, end of left ear cut off, no visible brand	.....	..... Jan.	15, 15 Mar.	11, 15	36.50 18.40
Morrow, E. H.	Crosstield	One sorrel gelding, 4 years old, white star on forehead, large bunch on both hind legs, branded half circle with a bar through it on left hip	Feb.	8, 15 Feb.	15, 15 Apr.	10, 15	18.00 2.00
"	"	One sorrel gelding, silver mane and tail, weight 1050 lbs., 5 years old, branded half circle over V on right shoulder. Badly wire cut	Dec.	15, 14 Feb.	27, 15 July	29, 15	36.00 16.54
Martin, G. E.	High Prairie	One bay gelding, 2 years old, white face, three white feet, no visible brand	Jan.	12, 15 Jan.	30, 15 Apr.	19, 15	27.50 11.80
Morkeberg, D. J.	Markerville	One roan steer, both ears cropped, one and a half years old, no visible brand	Feb.	15, 15 Feb.	27, 15 May	16, 15	12.00 7.45
McLuhan, J.	Mannville	One felt steer, has horns, no visible brand	Jan.	19, 15 Jan.	30, 15 Apr.	30, 15	29.50 7.45
McLayne, J. S.	Enchant	One white sow, weight about 250 lbs., very thin, no visible brand	June	1, 15 June	30, 15 Oct.	29, 15	20.00 5.25
"	"	One roan horse, weight about 1300 lbs., aged 12 years, branded D I on right hip and reversed F on left hip	June	1, 15 Nov.	15, 15 Dec.	4, 15	90.00 79.90

McBayne, J. S.	Ereant	One bay gelding, weight about 1300 lbs., aged 12 years, branded D 1 on right hip and reversed F on left hip.	1, 15 Nov.	15, 15 Dec.	4, 15 \$ 65.00	\$ 56.15
" " " " ..	"	One bay gelding, weight about 1300 lbs., aged 12 years, branded D 1 on right hip and reversed F on left hip.	1, 15 Nov.	15, 15 Dec.	4, 15 72.00	62.80
McCook, Lewis ..	Ame ..	One hereford yearling steer, branded reversed V, N over half diamond on right ribs ..	15, 14 Jan.	30, 15 Mar.	22, 15 43.00	19.15
McLean, D. B.	Mannville	One bay mare, right front foot and both hind feet white, white face, weight 600 lbs., 7 years old, branded half circle over cross over lazy J on left shoulder ..	5, 15 Jan.	15, 15 Apr.	5, 15 80.00	58.45
McDonald, F.	Coalhurst	One light bay mare, 9 years old, with 9 months old colt, mare branded K H over 1 on left shoulder ..	29, 15 May	15, 15 July	15, 15 75.00	65.15
McNeath, J. P.	Dorothy	One black steer calf, 6 or 7 months old ..	31, 15 Aug.	1, 15 Nov.	1, 15 51.50	9.95
" " " " ..	"	One red and white cow, 5 years old, branded bar over N H on right ribs, left ear notched V shape ..	14, 15 Aug.	31, 15 Nov.	1, 15 50.00	35.64
Nesbitt, L. D.	Brooks	One bay horse, branded lazy D over inverted F connected on right shoulder ..	15, 17 July	15, 15 Oct.	5, 15 38.00	30.00
" " " " ..	"	One bay colt, two weeks old when found, four white feet, bald face ..	10, 15 Oct.	15, 15 Oct.	22, 15 14.25	5.20
Powell, F. J.	Edwell	One red yearling steer, white switch to tail, wild, branded bar J anchor on ribs ..	23, 14 Jan.	15, 15 Apr.	23, 15 20.00	2.42
Pickett, A. V.	Hastings Coulee	One black mare, white spot on forehead, front legs somewhat disbed below knees, rising 5 years old, halter broken, no visible brand ..	15, 15 Feb.	15, 15 May	4, 15 141.00	116.30
Price, Geo.	Delia	One dark brown filly, roached mane, weight 800 lbs., 2 years old, no visible brand ..	15, 15 Aug.	15, 15 Nov.	27, 15 59.00	45.75
Paul, John	Ft. Sask.	One grey mare, coming 3 years old, white strip on face, both hind feet white, weight about 1100 lbs, no visible brand ..	21, 14 Sept.	15, 15 Oct.	9, 15 70.00	57.40
Reid, Wm. J.	Innisfree	One 3 year old red and white steer, white on end of tail, sing horns, no visible brand ..	1, 14 Dec.	31, 15 Mar.	11, 15 70.00	49.65
" " " " ..	"	One black horse, white spot in center of forehead, 9 or 10 years old, weight 1150 lbs., no visible brand ..	2, 15 Feb.	27, 15 Apr.	21, 15 71.00	47.80
Roy, Lezer E.	Chauvin	One grey gelding, about 10 years old, end of both ears off, no visible brand ..	15, 14 July	15, 15 Nov.	27, 15 51.00	31.48
Raymer, H. J.	Mirror	One bay gelding, branded F 1 connected on right thigh ..	5, 15 Jan.	15, 15 Mar.	17, 15 35.50	19.15
" " " " ..	"	One white mare, branded M on left hip, one very small bay colt ..	29, 15 Jan.	15, 15 Mar.	17, 15 24.00	...
Reid, Peter D.	Fairy-dell	One light bay gelding, black points, weight 1200 lbs., 5 years old, no visible brand, no shoes, collar mark on top of neck ..	1941 Dec.	21, 14 Feb.	17, 15 87.00	67.05
Richardson, S. A. Vegreville	"	One dark brown gelding, white star on forehead, weight 900 lbs., no visible brand ..	28, 14 Jan.	15, 15 Mar.	27, 15 40.00	20.50
" " " " ..	"	One dark 2 year old roan steer, white spot behind shoulder, small split in ear ..	16, 15 Feb.	27, 15 May	8, 15 20.00	2.25
Rodgers, Jas ..	Lomond	One bay gelding, 5 years old, weight 500 lbs., branded passycat on right shoulder ..	12, 14 June	15, 14 Jan.	1, 15 40.00	16.00
" " " " ..	"	One cream gelding, 9 years old, weight 1600 lbs., branded V over bar over inverted V over H over two bars on left shoulder and V over bar over inverted V on left thigh ..	12, 14 June	15, 14 Jan.	1, 15 50.00	26.00

SALES OF ESTRAY ANIMALS UNDER THE STRAY ANIMALS ORDINANCE.—(Continued.)

Justice	Address	CLASS OF ANIMAL	Date of Capture	First Gazette Notice	Date of Sale	Pro'ds of Sale	Sent to Dept.
Rodgers, Jas.	Lomond	One grey gelding, 7 years old, weight 1300 lbs., white collar marks, right ears split about one inch, no visible brand	June 26, 15	Aug. 14, 15	Oct. 20, 15	\$150.00	\$132.13
Rowell, A. T.	Delbourne	One red mooley cow, 10 or 12 years old, branded L on chest, on left ribs, and 41 on left shoulder	Jan. 10, 15	Jan. 30, 15	June 25, 15	19.00	1.55
"	"	One red and white steer, about 8 or 9 months old, no visible brand	Nov. 1, 14	Jan. 30, 15	Mar. 30, 15	25.25	8.20
Spencer, Fred	Big Valley	One light red steer, rising 2 years old, no visible brand	Dec. 18, 14	Jan. 15, 15	Feb. 20, 15	37.00	18.20
"	"	One red steer, white face, branded T partly over D on left hip	Nov. 17, 14	Dec. 15, 14	Jan. 22, 15	61.00	43.55
"	"	One brindle steer, white face, branded P inverted 4 on right ribs	Nov. 17, 14	Dec. 15, 14	Jan. 22, 15	61.00	43.55
"	"	One red mooley cow, white spot on forehead, branded bar over P inverted, 4 on left thigh	Dec. 21, 14	Jan. 15, 15	May 12, 15	48.50	27.80
Stewart, R.	Whitford	One yellowish red heifer, 1 year old, no brand	Dec. 1, 14	Jan. 15, 15	Mar. 22, 15	25.25	6.75
Slantz, C.	Wetaskiwin	One red and white steer, 2 years old, has horns, branded lazy Q bar over X on right ribs	Nov. 16, 14	Nov. 30, 14	Jan. 23, 15	48.00	27.10
"	"	One black mare, 4 years old, 4 white feet, white face, branded B on left hip	June 15, 15	July 15, 15	Oct. 18, 15	55.00	45.45
"	"	One brown mare, 6 years old, white star on face, no visible brand, wire cut on front foot	June 15, 15	July 15, 15	Oct. 18, 15	20.00	12.00
Stewart, I.	Sturgeonville	One roan sorrel mare, 10 years old	June 1, 14	Mar. 15, 15	Oct. 15, 15	20.00	.....
Schenck, W. A.	Vulcan	One yearling bay horse colt, star on forehead, no visible brand	Dec. 10, 14	Feb. 2, 15	July 3, 15	50.00	29.60
"	"	One 2 year old bay filly, no visible brand	Dec. 10, 14	Feb. 2, 15	July 3, 15	67.50	46.25
"	"	One 3 year old bay gelding, white hind feet, no visible brand	Dec. 10, 14	Feb. 2, 15	July 3, 15	96.00	73.30
"	"	One 6 year old bay mare, left hind foot white, no visible brand	Dec. 10, 14	Feb. 2, 15	July 3, 15	51.00	30.55
Spence, W. D.	Calgary	One aged brown gelding, branded long lazy Y on right thigh and 7 on left jaw	July 21, 15	Sept. 15, 15	Dec. 7, 15	57.00	46.00
Shibald, A. E.	Drumheller	One iron grey mare, 4 years old, weight 1200 lbs., branded M (monogram) on left shoulder	Jan. 1, 14	June 15, 14	Sept. 22, 15	150.00	137.00
Shaw, G. H.	Mewassin	One bay mare, 7 years old, weight 900 lbs., brand on left shoulder not legible	Sept. 28, 15	Sept. 30, 15	Dec. 24, 15	15.50	5.00
Tingle, C. N.	Hanna	One red 5 year old steer, branded bar over H Y on right ribs	Dec. 14, 14	Dec. 31, 14	Feb. 23, 15	57.00	35.40
"	"	One sorrel colt, 2 years old, no brand	Feb. 1, 15	Feb. 15, 15	Apr. 24, 15	45.00	23.00
Thompson, M. S.	Pendant D'Oreille	One bay gelding, left hind and front feet white, weight 1300 lbs., no visible brand	Nov. 17, 14	Jan. 30, 15	June 1, 15	56.00	37.95
Vigar, F. C.	Reichen	One iron grey gelding, weight 900 lbs., 7 years old, branded half circle over N 2 on left shoulder	Aug. 15, 14	Apr. 15, 15	July 23, 15	27.50	16.75
"	"	One bay gelding, weight 1200 lbs., unbranded	May 24, 14	June 30, 15	Oct. 4, 15	80.00	63.25
Van Allen, Harry	Cadsky	One buckskin mare and colt, branded spade on right shoulder	Apr. 1, 13	Oct. 15, 15	Dec. 31, 15	65.00	45.85

Van Allen, Harry	One buckskin yearling filly	1, 15 Oct.	15, 15 Dec.	31, 15 \$ 40.00	\$ 29.00
"	One aged brown gelding, white star, wire mark on left front leg, branded Q T on left shoulder	15, 12 Oct.	15, 15 Dec.	31, 15	25.00
"	One roan mare, white blaze on face, left front foot white, both hind feet white; black mane and tail distinctly U partly over N on left shoulder in-				
"	One small grey gelding, no visible brand	15, 15 Oct.	15, 15 Dec.	31, 15	137.50
Vigar, D.	One red steer, 4 years old, small white spots, would weigh 1200 lbs. if fat; rangy and slim, very poor	9, 15 Oct.	15, 15 Dec.	31, 15	15.00
Wagle, W. J.	One dark brown mare, strip on face, 10 years old, branded I inverted Y on left shoulder and T B on left hip	23, 15 Feb.	2, 15 May	7, 15	41.00
"	One bay mare, white strip on face, branded bay hook on left jaw	25, 15 July	31, 15 Oct.	9, 15	17.00
"	One light buckskin mare, aged, branded quarter circle over C X on right shoulder and U over J connected on left shoulder	25, 15 July	31, 15 Oct.	9, 15	41.00
"	One light bay gelding, both hind feet white, 3 years old, branded W 2 on left shoulder	25, 15 July	31, 15 Oct.	9, 15	8.50
Wilson, Guy C.	One yearling steer, red and white, branded quarter circle over J C on right ribs	1, 14 Dec.	15, 14 Mar.	13, 15	25.00
Welsh, McKenzie	One red steer calf, no visible brand	28, 14 Jan.	15, 15 Mar.	19, 15	20.00
Whitford, J. H.	One 2-year old roan heifer, with horns, no visible brand	15, 14 Dec.	15, 14 Mar.	16, 15	25.00
Whitson, Geo. H.	One small red heifer, 2 years old, has horns, both ears frozen or cut off	13, 15 Jan.	30, 15 Mar.	24, 15	14.00
Wallace, J.	One white heifer, 2 years old, dehorned when young, no visible brand	5, 15 Jan	30, 15 Mar	29, 15	20.00
Wetherick, J. J.	One red steer, small horns, white on belly, little white on end of tail, weight 400 lbs., one and a half years old, no visible brand	1, 14 Jan	30, 15 Apr.	19, 15	21.00
Western Stock Growers Ass'n	One steer, branded quarter circle over R over quarter circle on left thigh, shipped from Cardston to Moose Jaw in November 1913				65.23
"	One steer, branded quarter circle over reversed L on left side of neck, shipped from Cardston to Moose Jaw in November, 1913				63.90
"	One steer, branded 5 VR connected, on right ribs, shipped from Cardston to Moose Jaw in June 1914				76.16
"	One steer, branded G bar half diamond connected over V on right hip, shipped from Milk River to St. Paul, Minn., in November, 1914				75.26
"	One steer, branded quarter circle over 7 P on right hip, sold by Meek Bros., Raymond, 1914				61.20
Young, Robt. C.	One light bay mare, white strip down face, weight 150 to 300 lbs., branded lazy N P connected, on right thigh, B with vertical bar connected on left shoulder and quarter circle 2 over a long bar with two short bars, crossing the ends on right thigh, May	1, 15 June	30, 15 Oct.	8, 15	12.00
					4.50

EXPORTS

Shipping Point	Inspector	HORSES	CATTLE						Total
			Calves	Yearlings	Mature	Male	Female	Export	Local
			63	4	441	443	65	282	226
Acme	Norman Cook	110	...	...	...	...	...	...	508
Acheson	James Couch	...	...	...	...	...	...	...	...
Airdrie	Leslie Farr	138	4	22	315	225	116	13	328
Aldersyde	Wm. B. Way	...	...	...	1	1	...	...	1
Alix	H. A. Finch	...	11	...	277	172	116	75	213
Amisk	Philip W. Harrison	...	...	...	...	...	...	...	...
Ardley	H. Hampton	20	56	5	134	118	77	15	180
Athabasca	W. R. Day	23	4	5	51	23	37	...	60
Bashaw	J. C. Windsor	81	97	49	534	574	166	534	206
Bassano	Walter J. Brogan	301	1	5	282	161	137	...	288
Bawlf	K. O. Egan	16	4	2	72	66	12	70	8
Beiseker	F. A. Lount	38	...	...	163	103	60	87	76
Big Valley	Bert Uttley	1	...	...	740	608	132	740	...
Big Horn Lake	Thos. Tate	...	...	...	...	...	...	...	...
Blackfalds	Jos. Capron	...	...	...	496	246	250	177	319
Blackie	Fred Rockefeller	171	...	...	11	7	4	...	11
Botha	J. Frizzel	...	...	...	244	235	55	129	161
Bowden	Robt. McCue	43	14	32	...	...	...	...	290
Bow Island	R. J. Beattie	...	...	...	...	...	...	...	...
Bowell	Jos. DeLinks	...	...	...	...	...	...	...	...
Brant	Wm. Thomas	28	...	8	72	45	35	8	80
Bremher	Sidney Ottewell	...	...	...	14	7	7	...	14
Brocket	Clifford H. Clark	3	...	...	...	...	...	...	...
Brooks	A. P. Chudleigh	...	...	...	...	...	...	...	...
Bruce	Jas. Waidie	...	...	13	263	182	94	215	276
Cadogan	Wm. Bowes	9	...	1	12	10	3	11	13
Calgary	H. C. McMullen	2,734	125	38	370	244	289	266	533
Calgary	F. D. Sanders	1,363	1,013	246	19,043	13,857	6,445	4,944	20,302
Camrose	W. G. Duggan	115	23	2	509	372	162	171	534
Carlstadt	F. G. Bashen	213	...	...	21	7	14	...	21
Carlsland	W. W. Brown	5	3	...	3	...	6	...	6
Carstairs	John Gibson	459	79	47	1,768	1,452	442	634	1,894
Carston	R. A. Pilling	340	28	...	449	262	215	167	477
Carmangay	J. S. Ainslie	...	...	...	...	...	...	...	...
Castor	A. F. Jeffries	19	19	31	228	174	104	...	278

EXPORT

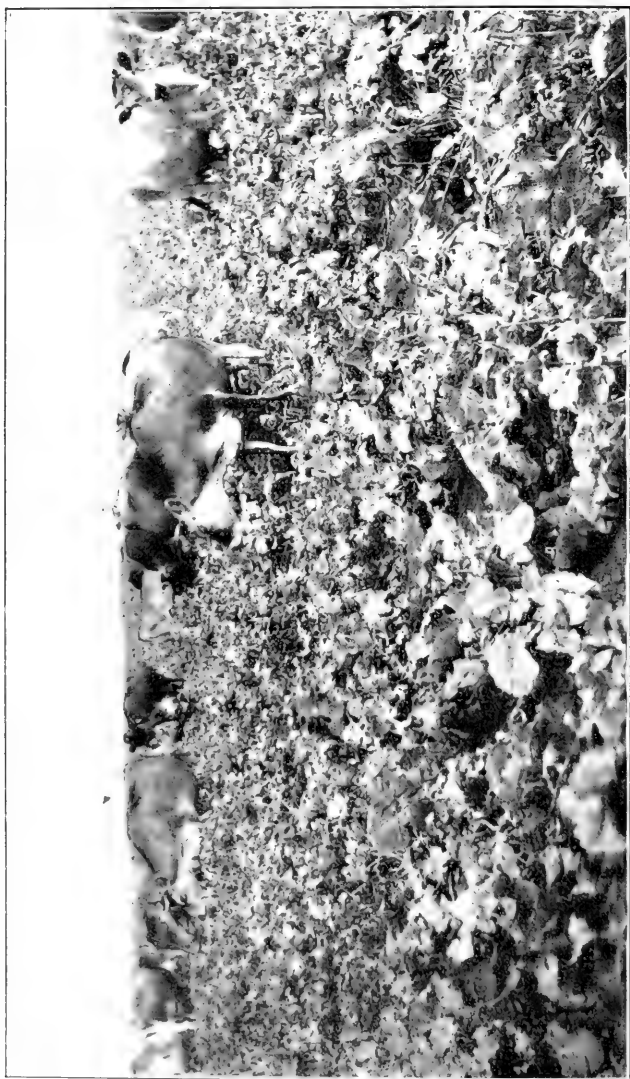
Shipping Point	Inspector	HORSES	EXPORT				CATTLE				Local	Total
			Calves	Yearlings	Mature	Male	Female	Export	Local	Total		
Ferintosh	F. Kuhnke	57	22	14	819	631	224	583	272	855		
Fleet	Fred Cameron	7	1	1	53	34	21	2	53	55		
Foremost	A. D. Medhurst	36	1	1	77	25	52	...	77	77		
Ft. Sask.	G. W. Davis	20	...	...	1,675	1,675	78	1,132	621	1,753		
Gadsby	J. E. McElhone	36	31	47	3,370	2,920	453	2,766	607	3,373		
Gleichen	Thos. Henderson	678	1	2	248	204	58	1	261	262		
Granum	P. Vandervoort	126	12	2	...	...	...	...	...	...
Grassy Lake	Roy L. Gold	10	...	...	148	148	1	...	149	149		
Greenshields	Chas. F. Gibson	...	...	1	404	357	51	23	385	408		
Gwynne	C. Maynard	35	...	4	...	...	...	...	...	...
Halkirk	W. H. Taylor	...	...	...	274	105	169	...	274	274		
Hanna	Geo. R. Cope	171	...	...	128	109	28	102	35	137		
Hardisty	Arthur Wood	10	7	2	1,145	626	754	...	1,380	1,380		
High River	R. Windiate	386	228	7	...	...	...	...	...	...
Holden	A. E. Stuart	...	...	...	524	397	127	...	524	524		
Holden	Alex. C. Brown	1	...	...	...	...	...	...	...	...
Hughenden	Richard D. Wood	...	...	...	...	...	...	...	...	...
Hussar	W. A. Tracey	...	...	...	...	...	...	...	...	...
Huxley	Geo. Pickering	...	...	...	272	128	145	...	272	272		
Hutton	E. N. McDuffie	...	...	...	245	84	179	187	76	263		
Innisfail	Alfred Aspinall	73	8	10	43	37	15	...	52	52		
Innisfree	L. M. Trace	3	3	6	...	...	...	...	...	...
Irricana	Wm. Dennis	...	...	...	72	40	33	11	62	73		
Irma	J. W. Stuart	...	1	...	18	16	2	...	18	18		
Irvine	F. G. McLaughlin	77	...	...	66	66	...	...	66	66		
Islay	D. H. Moore	...	...	...	582	457	125	...	582	582		
Jarrow	Albert Firkus	...	...	...	...	...	...	...	...	...
Jenner	Alex. Gordon	40	...	...	...	...	...	...	...	...
Keoma	T. S. Rintoul	...	...	...	...	...	...	...	...	...
Killam	Peter Aylesworth	...	...	...	...	...	...	...	...	...
Kingman	T. J. Rogness	...	...	...	339	298	54	246	106	352		
Kinsella	Stanley S. Barker	...	13	...	21	15	11	26	...	26		
Kitscoty	E. R. H. Phillips	34	3	2	696	451	248	425	274	699		
Lacombe	Harold Slater	34	...	...	81	32	49	...	81	81		
Lamont	Harvey Harris	5	7	15	154	120	56	...	176	176		

EXPORT

Shipping Point	Inspector	HORSES	CATTLE					Local	Total
			Calves	Yearlings	Mature	Male	Female		
Langdon	C. W. Barber	50	...	...	26	9	17	26	26
Lavoy	Geo. Hibbard .....	...	...	...	...	...	...	...	...
Leduc	C. S. Mortimer .....	...	...	...	...	...	...	...	...
Legal	O. Lemarre .....	...	...	...	...	...	...	...	...
Lethbridge	Chas. H. Kerr	549	...	...	6	...	6	6	6
Lewiston	Thos. Lewis .....	...	...	...	...	...	...	...	...
Lloydminster	Hiram Miller	2	...	...	553	459	124	584	584
Loughheed	J. R. Adams	190	43	24	326	225	168	371	393
Lousana	L. S. McKenzie .....	...	...	...	...	...	...	...	...
Loyalist	Lawrence V. Dunn .....	...	...	...	...	...	...	...	...
Lundbrek	W. S. Knight .....	...	...	...	...	...	...	...	...
Magrath	Benj. Matkins	164	441	...	811	776	456	1,150	1,252
Mannville	R. D. Irland .....	...	4	12	142	124	34	151	158
Medicine Hat	J. H. G. Bray	2,376	...	...	828	565	263	750	828
Meeting Creek	Jos. Philpott .....	...	7	...	529	472	64	536	536
Metiskow	P. P. Larson	2	...	1	119	102	18	120	120
Millet	Thos. B. Smith	12	...	...	8	8	...	8	8
Milk River	Jacob Jochem	24	...	1	3	4	...	4	4
Milburn	E. Huffman .....	...	...	...	163	138	25	141	163
Mirror	Albert Ray .....	...	4	...	355	287	72	162	559
Morley	Frank L. Wellman	112	1	...	1	1	2	...	2
Morinville	P. S. Gaudette .....	...	...	...	19	12	7	19	19
Mundare	Val Mohr .....	...	...	...	...	...	...	...	...
Munson	W. C. King .....	...	...	...	...	...	...	...	...
Monitor	Chas. Deadmarsh .....	...	...	...	203	133	40	263	263
Macleod	A. Scheer	557	11	...	345	204	157	238	361
Nanton	Wm. Robertson	214	6	52	1,501	879	680	1,446	1,559
Nateby	Hugh H. Forster	48	3	...	30	8	25	33	33
Nevis	R. H. Fox	8	...	...	42	21	21	42	42
New Dayton	Wm. Luscombe .....	...	...	...	...	...	...	...	...
New Norway	R. B. Swenerton .....	...	15	...	70	62	23	3	85
Ohaton	A. W. Fleming	13	...	...	47	34	13	47	47
Okotoks	Geo. S. C. Paterson .....	...	16	4	48	12	56	68	68
Olds	Thos. McKercher	238	28	2	2,355	2,286	99	14	2,385
Oyen	Jas. Cooper	95	...	...	19	16	3	19	19

EXPORT

Shipping Point	Inspector	HORSES	CATTLE						Local	Total
			Calves	Yearlings	Mature	Male	Female	Export		
Penhold	J. M. Hart	2	...	9	18	5	22	...	27	27
Pincher Creek	F. M. Collins	249	31	...	362	172	221	194	199	393
Plain Lake	Maxim Tomyn .....	...	...	...	...	...	...	...	...	...
Ponoka	W. E. Turner	150	34	3	283	101	219	44	276	320
Provost	L. H. Meiklejohn .....	...	...	...	4	2	2	2	2	4
Pine Lake	Robt. Milligan	44	...	...	...	...	...	...	...	...
Ranfurly	E. I. Button .....	...	...	1	56	46	11	...	57	57
Ranfurly	John A. McDonald .....	...	...	...	...	...	...	...	...	...
Ravine	A. A. Morton .....	...	...	...	19	19	...	...	19	19
Raymond	T. J. O'Brien	284	156	165	786	699	408	745	362	1,107
Red Deer	F. L. Cottle	321	9	37	285	122	209	155	176	331
Redlands	Donald Martin .....	...	...	...	...	...	...	...	...	...
Red Willow	Jas. Struthers .....	...	...	...	50	43	7	12	38	50
Retlaw	W. A. Pollock	7	...	...	...	...	...	...	...	...
Rockyford	Andrew Haughman	68	15	6	16	9	28	6	31	37
Rocky Mt. House	Harold Fear	14	...	5	98	84	19	...	103	103
Rosebud	John Martin	136	...	18	25	43	...	...	43	43
Round Hill	Wm. Ross .....	...	...	...	...	...	...	...	...	...
Rumsey	A. R. Tolman .....	...	...	...	422	350	73	217	206	423
Ryley	P. M. Kjosness	17	1	...	...	...	...	...	...	...
Scollard	C. S. Thompson .....	...	...	...	208	194	14	...	208	208
Sedgewick	John Burns .....	...	...	...	...	...	...	...	...	...
Spruce Grove	Edw. Guinette .....	...	...	...	3,015	2,520	567	706	2,381	3,087
Standard	Aug. Jensen .....	...	72	...	67	34	37	...	71	71
Stavely	R. A. Hopkins	28	...	4	...	...	...	...	...	...
St. Albert	M. Courchene .....	...	...	...	...	...	...	...	...	...
St. Paul des Metis	Lenon Roberge .....	...	...	...	...	...	...	...	...	...
Stettler	Jay C. Blain .....	...	...	...	...	...	...	...	...	...
Stony Plain	E. J. Duval	91	...	2	90	67	25	...	92	92
Strathcona	Geo. S. McDonald	309	22	51	1,756	1,040	789	9	1,820	1,829
Strathmore	Oscar Moorehouse	79	30	4	174	115	93	...	208	208
Stirling	M. L. Miller .....	...	...	...	...	...	...	...	...	...
Strome	W. T. Phipps	39	1	8	543	487	65	526	26	552
Suffield	J. O. Roberts .....	...	...	...	...	...	...	...	...	...
Swalwell	Fred. W. Currie	101	...	...	20	18	2	...	20	20



FORAGE IN 1915—MEDICINE HAT DEMONSTRATION FARM.

REPORT OF THE DAIRY COMMISSIONER

SIR,—I have the honour to submit herewith the report of the Dairy Commissioner's Branch for the year ending December 31st, 1915, under the following heads:

- I.—General.
- II.—Creameries and Cheese Factories.
- III.—Marketing of Creamery Butter, Eggs and Dressed Poultry.
- IV.—Grading of Butter.
- V.—Educational Butter Scoring Contest.
- VI.—Convention of Creamery Delegates.
- VII.—Judging at Exhibitions.
- VIII.—Dairy Instruction Work.
- IX.—Public Meetings.
- X.—Correspondence.

I.—GENERAL.

To the dairymen of Alberta the year 1915 has been the most satisfactory and successful yet from every point of view. The climatic conditions throughout the Province were favorable to a heavy milk production. The grazing season was three to four weeks longer than that of 1914. The spring opened up about three weeks earlier, plenty of rain fell during the summer and kept the pastures green well into the autumn. The heavy grain and forage crops grown in 1915 provided a plentiful supply of winter feed for the stock and there is every reason to believe that this winter's milk production will be comparatively heavy.

That several silos have been built and put into commission in the Province during the past year is recorded here as an interesting indication that more and better winter dairying is under way. Two of the silos referred to were built in the extreme south of the Province, the Cardston district. They were filled with corn and alfalfa and I am informed that they are now giving good service.

LESS DAIRY BUTTER BEING MADE.

On account of economic conditions the per capita consumption of milk and cream in our larger centres of population was somewhat lighter than usual, consequently the production of butter and cheese from the surplus of milk and cream was greater. There are no statistics available to show how much butter and cheese was made in farm dairies last year, but judging by the comparative scarcity of dairy butter available for shipment to outside markets during the latter part of the season one can but come to the conclusion that the output of dairy butter must have decreased to a considerable extent. There is little doubt that before long the production of butter in home dairies will be limited to purely local requirements.

From a commercial point of view this will be a matter for congratulation. In past years much of our surplus dairy butter has been shipped out as low grade, low priced "packing stock" to make room for importation of considerable quantities of high grade, high priced creamery butter.

The gradual extension of transportation facilities, the aggressive campaign that is being carried on by the creamery operators in their several fields and the demands of the best markets at home and abroad

will hasten the day when the surplus dairy products of the farm will go out into these markets in the form of the higher priced and more popular creamery butter. Assuming that this will be so, we may well maintain that the efficient operation and management of the creameries is of immediate and very real concern to the dairymen on the farms just as it is of vital importance to the operators and to those who have invested capital in the creamery plants.

CREAMERY BUTTER PRODUCTION.

The creamery business of the Province has shown marked progress during the past year, not only in point of quantity but also in the matter of quality and market value of the butter manufactured. With very few exceptions the 57 creamery plants that were in operation in 1915 reported a substantial increase in the volume of their business. Their total butter output for the year ending October 31st, 1915, was reported to be 7,376,871 pounds, as compared with 5,444,806 pounds (reported last year as 5,450,000 pounds) for the previous 12 months, making an increase of 1,932,065 pounds, or 35.48%.

There are 15 central creameries operating in the cities of Edmonton, Calgary and Lethbridge. They have produced during the year 74% of the total butter output. The remaining 26% was manufactured by 42 local creameries, of which 13 were operated by creamery associations on co-operative or semi-co-operative lines.



THE DAIRY COW AND BROOD SOW ON A PEACE RIVER HOMESTEAD.

DEVELOPMENT IN GENERAL.

While, as we have now seen, there was a marked general increase in the butter output of the creameries in the Province a few comparisons from a geographical point of view may be of interest here. The 24 creameries operating north of Red Deer made 57.38% and the 33 creameries running south of Red Deer made 42.62% of the year's creamery butter output. The former showed an increase of 21.74% in their output over 1914 and the latter reported a 60.75% increase covering the same period. The 13 creameries that were operating south of Calgary reported a 68.95% increase in their year's butter production as against an increase of 36.21% in 1914. While the very satisfactory increase in the production

of creamery butter of the southern part of the Province is, to some extent, due to the favorable climatic conditions and the excellent grazing during the summer, the percentage of the annual increase during the past four years has been above the average for the whole Province. This indicates that mixed farming and dairying are steadily gaining ground in the southern as well as in the central part of the Province.

QUALITY BASIS MARKETING.

One very gratifying feature about the report of the year's work was that 96% of all the creamery butter was made from cream that had been bought from the farmers and paid for upon a grade basis. The forty-five cream grading creameries, reporting a combined patronage of some 13,500 dairy farmers throughout the Province, have rendered a notable service in that they bring home to their patrons in a tangible way the "quality idea" which is bound to grow and eventually extend to the production and marketing of such other products of the farms as are still being handled on a "catch-as-catch-can" basis.

FACTORY CHEESE PRODUCTION.

The cheese making business has also made good progress during the past year. A total of 372,693 pounds of cheese was made in 13 cheese factories as compared with 70,581 pounds made in 5 factories during the season of 1914. It is interesting to note that 50 per cent. of the past season's factory cheese output was manufactured in three of the city dairies which are located at Calgary and Edmonton. The comparatively high cheese prices that ruled during the season made it practicable for city dairies to handle in this way to mutual advantage any temporary surplus of milk which they received from their milk shippers. The cheese was practically all marketed in the Province.

MARKETING OF CREAMERY BUTTER.

The marketing of creamery butter during the past year and the prices realized by the creameries must have been very satisfactory to all concerned, including the farmers who patronized the creameries. The creamery butter that was available for export was shipped principally to British Columbia, although some ten carloads were shipped to Montreal and Toronto and a considerable quantity exported to Australia in the early part of the summer. The Provincial Department of Agriculture, through its butter marketing and grading service, has been able to keep in close touch and co-operation with the markets on one hand and the butter manufacturers upon the other.

CONFERENCE AT VANCOUVER.

On August 24th last it was my privilege to participate, at Vancouver, in a conference of the Wholesale Produce Merchants of Vancouver and Victoria and the Dairy Commissioners of the Prairie Provinces. The conference was arranged by Messrs. Robertson, Morris & Co., Ltd., of Vancouver, and the following firms were represented: Kelly, Douglas & Co., Ltd.; F. R. Stewart & Co., Ltd.; A. P. Slade & Co.; The W. H. Malkin Co., Ltd.; Naismith & Co.; The Parsons-Haddock Co., Ltd.; P. Burns & Co., Ltd.; The Swift-Canadian Co., Ltd.; G. W. Harrower; The Canadian Produce Co.; The Mainland Ice & Cold Storage Co., Ltd.; The Vancouver Creamery Co.; Robertson, Morris & Co., Ltd.

Mr. R. Robertson, presiding, opened the conference by stating that it had been arranged for the purpose of discussing thoroughly the creamery butter situation in the West. The dairy industry is developing rapidly in the Prairie Provinces and it was felt by the produce trade generally that the West should soon be able to supply its home markets with creamery butter. He referred to the work that was being done by the Governments of the Western Provinces, in co-operation with the dairymen, to improve the quality of their dairy products and felt that at this time a conference and frank discussion between the produce merchants in a body and the Dairy Commissioners would be a benefit to all concerned. He invited the members of the trade to present any helpful criticism that they might have to make in connection with the quality of the creamery butter that they had received from the Prairie Provinces. He knew that the Dairy Commissioners would be glad to discuss these matters with the trade, that they would transmit to the dairy men in their respective provinces the views expressed at the conference and adopt such measures as they might deem expedient to help bring the producing end into line with the needs of the market as expressed by the trade. The majority of the produce men present spoke and while they expressed their approval and commendation of the great improvement that has been made during the past year or two in the quality, especially in the workmanship, of the creamery butter of the Prairie Provinces, they pointed out where in their judgment further improvement could and should be made before it would fully take the place of the imported, high grade commodity which had in recent years secured such a firm hold on the market.

It was freely stated that the adoption of the grading of creamery butter by the Departments of Agriculture in the Prairie Provinces had made business much more pleasant and satisfactory to the produce men than it was before. Their main criticism was directed at unsuitable packages being used, both as regards form and appearance. It was pointed out that some 90 per cent. of the creamery butter received on the Vancouver market was cut up and sold in the retail trade in the form of 1 pound bricks and that the western package measuring 13 in. by 13 in. by 10 in. did not lend itself to being conveniently cut into bricks of the standard form used in the Vancouver and Victoria markets. The 56 pound box should be practically a cube in form and should be made of good material. Regarding the contents of the packages it was stated that to fully answer the purpose of the Coast trade butter must have good keeping quality. In that respect Canadian made butter was said to suffer by comparison with the best imported product. Minor points were also brought out with regard to the marking or branding of the packages.

After the representatives of the trade had spoken the chairman invited the Dairy Commissioners to discuss from their standpoint the criticism that had been made. This they did by outlining the methods which had been adopted in each province to promote the improvement of the dairy products.

Personally, I sketched the inception of the cream and butter grading principle in the creamery work in Alberta and the standard followed in the grading of creamery butter. While I recognized that it would be desirable to have the Western Provinces collectively adopt and maintain uniform grade standards for butter, certain practical difficulties seemed to be in the way. Pending such standardization, however, I thought that

as the creamery product from each province would be a factor in the market the trade would soon become sufficiently familiar with the relative grade standards to do satisfactory business with the creameries of any province. I took occasion to acknowledge the generous co-operation that we in Alberta had received from the wholesale produce merchants of British Columbia in connection with the establishment of the grade principle in our creamery business.

The Western produce men are now practically unanimous in demanding Government grade certificates with the creamery butter they buy.

Further reference will be made, in another section of my report, to the proceedings of the conference.

II.—CHEESE FACTORIES AND CREAMERIES.

The following is a list of the thirteen cheese factories and the fifty-seven creameries that were operated in the Province during the season of 1915. Their location and business address is given in each case.

CHEESE FACTORIES.

Name of Factory	Proprietor or Manager	P.O. Address
The Bottrel Cheese Factory..	J. F. Boucher	Bottrel
The Glen Park Cheese Factory	Wieting & Son	Buford
The Calgary Central Creamery	P. Pallesen	Calgary
The Eckville Cheese Factory	R. H. Woods	Eckville
The Woodland Dairy	E. T. Love	Edmonton
The Edmonton City Dairy..	Edmonton City Dairy, Ltd....	Edmonton
The Ferry Bank Cheese Factory	B. T. Wheeler	Ferry Bank
The Olds Butter and Cheese Factory	W. A. Brodie	Olds
The Mountain View Cheese Factory	H. McIntosh	Cardston
The Star Co-operative Cheese Ass'n	Cyrille Cloutier	Pickardville
The Raven Cheese Factory..	Fred Copland	Raven
Hepworth & Trimble	H. W. Trimble	Red Deer
The Kuusamo Cheese Factory	T. B. Millar	Sylvan Lake

CREAMERIES.

Name of Factory	Proprietor or Manager	P. O. Address
The Beaumont Creamery...	A. Desnoyers	Beaumont
The Bentley Creamery	J. F. Millar	Bentley
The Bottrel Creamery	J. T. Boucher	Bottrel
The Calgary Central Creamery	P. Pallesen	Calgary
Campbell & Griffin	Campbell & Griffin, Limited..	Calgary
The Carlyle Dairy	The Carlyle Dairy Co.	Calgary
The Cow Butter Dairy	J. E. Carman	Calgary
The Hays Dairy	Hays & Co., Ltd.	Calgary
The Co-operative Dairy ...	Drake & Derby	Calgary
The Golden Rose Creamery	The Prairie Farmers' Dairy Co., Ltd.	Camrose
The Cardston Creamery Association	H. McIntosh	Cardston
The Carmangay Creamery..	C. H. Messinger	Carmangay
The Claresholm Creamery..	B. Lundh	Claresholm

CREAMERIES—*Continued.*

Name of Factory	Proprietor or Manager	P.O. Address
The Golden Rod Creamery Company	J. Herb. Thompson	Clive
The Cochrane Creamery	J. Cook	Cochrane
The Clover Hill Creamery	R. Leblanc	Didsbury
The Daysland Creamery	The Prairie Farmers' Dairy Co., Ltd.	Camrose
The Prairie Farmers' Dairy Edmonton		
The Edmonton City Dairy	Edmonton City Dairy, Ltd.	Edmonton
The Podmore Creameries, Ltd.	J. C. Podmore	Edmonton
The Enterprise Dairy, Ltd.	F. S. Hunter	Edmonton
The Woodland Dairy, Limited	E. T. Love	Edmonton
The Elkton Creamery	H. H. Reimer	Elkton
The Ferintosh Creamery	B. E. Sickelsteel	Ferintosh
The Battle River Creamery	B. T. Wheeler	Ferry Bank
The High River Creamery Association	J. S. Jones	High River
The Lacombe Creamery	A. Urquhart & Co.	Lacombe
The Crystal Dairy, Ltd.	Otto Allbrecht	Lethbridge
The Pure Food Ice Cream Co.	A. Regimbal	Lethbridge
The Hygienic Dairy, Ltd.	B. Reed	Lethbridge
The Macleod Creamery Association	Chas. McKay	Macleod
The Magrath Creamery Association	J. A. Harker	Magrath
The Innisfail Creamery	D. Morkeberg	Markerville
The Markerville Creamery		
The Elnora Creamery	J. H. Cameron	Mayton
The Mayton Creamery		
The Royal Dairy, Ltd.	Geo. N. Smith	Medicine Hat
The O. K. Creamery Co.	W. H. Johnson	Morningside
The Nanton Creamery Association	D. E. McLean	Nanton
New Norway	Prairie Farmers' Dairy Co., Ltd.	New Norway
The Olds Butter & Cheese Factory	W. A. Brodie	Olds
The Pincher Creek Creamery	W. R. McKerricker	Pincher Creek
The Wild Rose Creamery	A. Barrett	Ponoka
The Quarrel Creamery	J. A. Brown	Quarrel
The Raven Creamery	Fred M. Copland	Raven
Hepworth & Trimble	Hepworth & Trimble	Red Deer
The Red Deer B. & C. Mfg. Association	M. L. Campbell	Red Deer
The Red Lodge Creamery	Colin Thomson	Red Lodge
The Richdale Creamery	A. E. Kofoed	Richdale
The Riviere Qui Barre Creamery	Jos. Poirier	Riviere Qui Barre
The Beaver Lake Farmers' Creamery Association	A. Finseth	Riley
The C. P. R. Demonstration Farm	B. Smith	Strathmore
The Stettler Creamery	Edmonton City Dairy, Ltd.	Stettler
The Knee Hill Creamery	Nelson & Barron	Sunnyslope
The St. Paul Creamery	Ed. Rousseau	St. Paul de Metis
The Vermilion Creamery	Moses & Roseborough	Vermilion
The Viking Co-operative Creamery Association	J. McAthey	Viking

The cheese factories at Bottrel, Eckville, Olds and Red Deer (Hepworth & Trimble), re-opened and new ones were established at Edmonton (The Woodland Dairy), Ferry Bank, Raven and Pickardville during the season. The cheese production of the individual factories ranged from 900 pounds to 88,291 pounds.

Three of the creamery plants that were operated in 1914 did not re-open. One of these was a branch plant, the other was turned into a cream shipping station and the third apparently closed for want of patronage. The following eight plants were re-opened after a rest of from one to several years, viz: Bottrel, Camrose, Ferry Bank, New Norway, Olds, Stettler, St. Paul de Metis and Vermilion. Six new creameries were opened at Beaumont, at Edmonton (The Enterprise), at Calgary (Campbell & Griffin, Ltd., The Cow Butter Dairy, The Co-operative Dairy), and at Richdale. This makes a net increase of eleven creameries for the year, and it looks now as though several more local creamery plants, that have been standing idle for some time, will be re-opened during the coming season.

III.—BUTTER MARKETING SERVICE.

During the past season the operators of 25 creameries entered into the butter marketing agreement with the Department. A new provision was added, as Sec. 5, to the 1915 agreement to the effect that the creamery operator agrees to grade and classify according to its condition and quality the cream accepted by him from the farmers and to pay on each grade a price which in his judgment represents its relative market value. This requirement was added for the purpose of securing in every case to the individual creamery patron concerned the financial benefit that accrues from a scheme of quality-basis marketing. The marketing chain is not complete until the preference of the ultimate market, expressed in dollars and cents, is passed back to the initial producer. Otherwise the marketing agreement was identical with the form given on page 67 of the Annual Report for 1914.

The following tables I. and II. show the quantity of butter marketed for each creamery and the average selling price realized for the winter season 1914-15 and the summer season 1915, respectively.

TABLE I.
SUMMARY OF BUTTER SALES—WINTER SEASON 1914-1915.

Creamery or Shipper	Pounds of Butter Sold	Value at Calgary	Average Price per Pound Cents
A. Hurst, Nanton	336	\$ 92.40	27.5
D. Morkeberg Lakeview	672	186.48	27.75
D. Morkeberg, Markerville	2,856	795.76	27.86
Red Deer B. & C. Mfg. Association ...	2,520	661.36	26.25
H. Creighton, Ferintosh	4,067	1,143.80	28.12
The Cardston Creamery Association ..	16,478	4,588.27	27.24
G. A. Anderson, Lacombe	4,661	1,285.17	27.57
The Viking Co-op. Creamery Association	9,186	2,608.58	28.39
P. Pallesen, Calgary	8,624	2,414.72	28.00
Nelson & Barron, Sunnyslope	896	217.84	24.31
The Magrath Creamery Association ...	837	215.97	25.80
The Beaver Lake Farmers' Creamery Association	2,840	803.72	28.30
The Carmangay Creamery	4,934	1,292.31	26.19
Totals and Average	58,907	\$16,306.38	27.68

TABLE II.

SUMMARY OF BUTTER SALES AT CALGARY—SUMMER SEASON, 1915.

Creamery or Shipper	Pounds of Butter Sold	Value at Calgary	Average Price per Pound
			Cents
G. S. Ferris in Trust, Nanton	21,799	\$ 5,579.47	25.594
D. Morkeberg, Elnora	47,361	13,151.37	27.768
D. Morkeberg, Innisfail	52,471	14,684.13	27.985
D. Morkeberg, Markerville	68,226	18,825.03	27.592
Red Deer B. & C. Mfg. Association, Red Deer	45,215	12,144.43	26.859
J. T. Boucher, Bottrel	3,192	759.36	25.789
John A. Brown, Quarrel	11,610	3,068.02	26.425
Hepworth & Trimble, Red Deer	672	168.56	25.083
H. Creighton, Ferintosh	16,670	4,337.00	26.017
B. E. Sicksteel, Ferintosh	14,765	3,809.96	25.804
O.K. Creamery Co., Morningside	13,533	3,348.25	24.741
Cardston Creamery Association, Cardston	161,073	44,616.93	27.7
Viking Co-op. Creamery Association, Viking	82,603	22,865.87	27.682
Hays & Co., Ltd., Calgary	43,473	11,858.96	27.279
P. Pallesen, Calgary	35,294	9,924.56	28.12
F. M. Copland, Raven	2,296	545.44	23.756
Nelson & Barron, Sunnyslope	8,512	2,231.88	26.220
Magrath Creamery Association, Magrath	13,934	3,568.38	25.609
Edmonton City Dairy Ltd., Edmonton	48,888	13,179.60	26.959
A. E. Kofoed, Richdale	112	24.64	22.0
The Clive Creamery Co., Clive	1,848	434.00	23.485
Beaver Lake Farmers' Creamery Association, Ryley	27,343	7,116.17	26.025
The Podmore Creameries Ltd., Edmonton	4,536	1,145.20	25.247
The Royal Dairy Ltd., Medicine Hat...	2,072	519.40	25.067
W. A. Brodie, Olds	7,121	1,802.49	25.312
B. T. Wheeler, Ferry Bank	2,100	528.50	25.167
Totals and Average	736,719	\$200,237.60	27.1796

It will be seen from the foregoing that the Department was asked to market, during the year, 795,626 pounds, or 10.78 per cent. of the total creamery butter made in the Province, a proportion corresponding very closely with that of the previous year (10.73%). The figures in the right hand column of the tables, especially for the summer season, reveal marked differences in the selling price of the butter which was marketed for the various creameries. These differences are due very largely to the relative grades and keeping qualities of the butter and, to a smaller extent, to the time at which the butter was made and sold. Compared with last year's statement of butter sales for the summer season we find that the average selling price for 1915 was 1.312 cents per pound higher.

As an interesting commentary upon the changing market conditions I may cite from the records of our marketing work the grades and the average selling price of each grade of creamery butter handled by the Department during the past three summer seasons:

Grades	1913		1914		1915	
	Per cent. of Total	Cents per Pound	Per cent. of Total	Cents per Pound	Per cent. of Total	Cents per Pound
Specials	58.43	28.45	71.10	26.87	59.68	27.956
Firsts	25.27	25.33	19.82	24.78	32.04	26.52
Seconds	12.57	22.97	8.62	20.49	7.34	24.243
O. G.	3.73	20.86	46	18.00	.94	23.218
Average		26.69		25.867		27.179

Although these figures are based upon the sales of about 10 per cent. of the creamery butter production during each year to the wholesale trade, they may be regarded as fairly representative for the Province. They show clearly the character of the butter market in Western Canada. In normal times there is a wide spread in the prices paid by the trade for the different grades of butter, because the majority of the consumers want only the highest grades. In 1915 when, with most of them, retrenchment was the order of the day, we find the price differentials less marked. The greater demand for medium priced butter reacted at once on the relative price levels, resulting, as we see, in bringing the values of the different grades closer together. This, to be sure, was a good thing for some of our dairymen, who have not yet learned the lesson that is brought home to them so sharply in normal times. The path of safety and profit, however, lies in the direction of quality.

Referring again to the figures given in the comparative table under "per cent. of totals" it would appear that the butter handled in 1915 was of a somewhat lower quality than that of the preceding season. This was not the case. At the beginning of the season's business we decided upon an upward revision of the grade standards to the extent of one point in the flavor score required for each grade. The result would naturally be, and was, a reduced percentage of "Specials" and a corresponding increase of "Firsts."

MARKETING OF EGGS.

As a direct result of the campaign that has been carried on by the Department through the Poultry Superintendent's Branch, for improved methods in the production and marketing of eggs, several co-operative egg circles were organized in the Province early in 1914.

Some of these circles, organized at Ryley, Irma, Moyerton, Edwell, Claresholm and Olds shipped some of their eggs to the Department for marketing under a special marketing agreement, form of which is given under:

MEMORANDUM OF AGREEMENT between

The Department of Agriculture for Alberta, and
Association ofrespecting the marketing of eggs.

1. The Association agrees to produce, prepare and forward their eggs according to "Requirements for the production and marketing of fresh eggs," as contained in the attached copy of Poultry Branch Bulletin entitled "Co-operative Marketing of Eggs," and according to such special instructions as the said department may issue from time to time in that behalf.

2. The Association agrees that two grades only are to be made of the marketable eggs forwarded to the Department for disposal and that these grades are to be as follows:

Selects: Eggs weighing 2 oz. each and at least 24 oz. to the dozen, of good shape, unwashed and not more than one week old in winter, and not more than five days old in summer.

No. 1: Eggs weighing not less than 1 $\frac{3}{4}$ oz. each, and not less than 21 oz. to the dozen, otherwise similar to Selects.

3. In consideration of the foregoing, the Department agrees for the period of one year from March 1st, 1915, to market the eggs received from the Association for that purpose to the best of its judgment and ability and to pay the Association the net proceeds realized from the sale of such eggs after deducting:

(a) The average cost of egg cases and other supplies furnished by the Department (1) to the Association for its local use or (2) to be used at the terminal receiving station for the re-packing of eggs for the market.

(b) The average cost of transportation paid on all eggs received at the receiving station selected by the Department.

(c) The cost of candling, grading, storing, preparing for market, and the marketing of the eggs so received.

4. The Department agrees to grade and classify the eggs received from the Association according to the standards set out under the foregoing Section 2 and to market the different grades to best advantage.

5. The Department agrees to insure the eggs against loss by fire only while held in storage by the Department as trustee for and on behalf of the Association to the extent of two-thirds of the amount of their estimated market value.

6. The Department agrees to pay the Association on each shipment of eggs received from the Association such advance as may be estimated to be the current market value of such eggs less the charges specified under Section 3 of this Agreement and to pay any balance due on such sales on or about the first day of November and the first day of June.

Dated atthis.....day of1915.

Witness:
For the Association.

Witness:
For the Department of Agriculture.

Shortly after the shipments of eggs were received at Calgary, together with detailed shipping reports in triplicate (see form), the eggs were candled and the classification of each patron's supply entered upon the shipping report opposite to his or her name and number. A copy of the classification was then mailed to the manager of the egg circle interested, with the advance payments referred to in the agreement and the revenue was apportioned by him locally among the several patrons and upon the basis of the classification of their eggs.

Report Sheet No.

Alberta Co-operative Egg Circle No. at

Date of Shipment

[illegible]

Following is the classification of the season's egg receipts and the prices realized for them at Calgary:

Selects	33.2%	27.5 cents per dozen
No. 1.	57.9%	24.5 cents per dozen
No. 2.	3.2%	20.25 cents per dozen
Checks	4.5%	15.65 cents per dozen
Loss	1.2%	
<hr/>		
100.0%		

The egg marketing service under the agreement already referred to was continued during the season of 1915 but only two egg circles took advantage of it and but to small extent.

In addition the following separate form of agreement (No. 2) was adopted by the Department for the marketing of eggs for individual buyers:

MEMORANDUM OF AGREEMENT

between

The Department of Agriculture for Alberta, and
of respecting the marketing of eggs.

(1) agrees to grade all eggs received by him from farmers for marketing under the provisions of this Agreement and to pay for each grade a price which in his judgment represents its relative market value at time of receipt and to prepare and forward the eggs according to the directions that the said Department may communicate to him from time to time in that behalf.

(2) agrees that two grades only are to be made of the marketable eggs forwarded to the Department for disposal and that these grades are to be as follows:

Selects: Eggs weighing 2 oz. each and at least 24 oz. to the dozen, of good shape, unwashed and not more than one week old in Winter, and not more than five days old in the Summer.

No. 1: Eggs weighing not less than 1¾ oz. each and not less than 21 oz. to the dozen, otherwise similar to Selects.

(3) In consideration of the foregoing the Department agrees for the period of one year from March 1, 1915, to market the eggs received from for that purpose to the best of its judgment and ability and to pay the net proceeds realized from the sale of such eggs after deducting:

(a) The average cost of egg cases and other supplies furnished by the Department (1) to for his local use or (2) to be used at the terminal receiving station for the re-packing of eggs for the market.

(b) The average cost of transportation paid on all eggs received at the receiving station selected by the Department.

(c) The cost of candling, grading, storing, preparing for market, and the marketing of the eggs so received.

(4) The Department agrees to grade and classify the eggs received from according to the standards set out under the foregoing Section 2 and to market the different grades to best advantage.

(5) The Department agrees to insure the eggs against loss by fire only while held in storage by the Department as trustee for and on behalf of to the extent of two-thirds of the amount of their estimated market value.

(6) The Department agrees to pay on each shipment of eggs received from such advances as may be estimated to be the current market value of such eggs less the charges specified under Section 3 of this Agreement and to pay any balance due on such sales on or about the first day of November and the first day of June.

Dated at this day of 1915.

Witness:

Witness:

For the Department of Agriculture.

Messrs. D. Morkeberg, Markerville, and A. E. Kofeod, Riehdale, entered into agreement No. 2 and shipped eggs to the Department for marketing, the latter for only a part of the season.

The classification of the eggs and the prices realized from their sale at Calgary were:

Selects	6.3%	28.914 cents per dozen
No. 1.	73.1%	26.85 cents per dozen
No. 2.	16.7%	25.746 cents per dozen
Checks	2.6%	9.19 cents per dozen
Loss	1.3%	

100.0%

Lest a comparison of the foregoing classification with that of the eggs received for marketing during the season of 1914 should prove misleading it should be stated here that the grade standards adopted for the candling of the eggs in 1915 were considerably higher than those for 1914. The utility of the egg marketing service and, for that matter, of any service conducted upon a similar principle, should not be measured merely by the direct results secured through the volume of business handled. Indirectly, such services help in a general way to encourage quality production, quality marketing, and to maintain reasonable price levels in the localities affected. The indirect results accruing from co-operative marketing cannot, in the nature of things, be stated in so many dollars and cents. They are to be found in a better understanding and keener appreciation of some of the fundamental principles in production and marketing.

MARKETING OF DRESSED POULTRY.

With the general development of the poultry business of the Province the problem of advantageous marketing of dressed poultry is asserting itself in some districts. The trouble seems to be, mainly, that the proper fleshing, killing and dressing of the birds is not receiving at the hands of the producer the careful attention that market conditions warrant.

In order to encourage improvement in this respect the Department undertook during the past season to include in its marketing service the handling of dressed poultry. The business was handled through the Dairy Branch and on the conditions set out in the following form of agreement:

MEMORANDUM OF AGREEMENT between

The Department of Agriculture for Alberta, and
of..... respecting the marketing of dressed poultry.

(1) agrees to grade all poultry purchased by him from farmers for marketing under the provisions of this Agreement, to pay for each grade a price which in his judgment represents its relative market value at time of purchase, to prepare and forward the poultry according to the directions that the said Department may communicate to him and to furnish to the Department such records as may be required from time to time in that behalf.

(2) In consideration of the foregoing the Department agrees, for the period of one year from March 1, 1915, to market the dressed poultry received from..... for that purpose to the best of its judgment and ability and to pay the net proceeds realized from the sale of such poultry after deducting:

(a) The cost of transportation paid by the Department on poultry so received.

(b) The cost of storing, preparing for market and the marketing of the poultry so received.

(3) The Department agrees to pay on each shipment of poultry so received from such advances as may be estimated to be its current market value less the charges specified under Section 2 of this Agreement and to pay any balance due on such sales from time to time.

Dated at this day of 1915.

Witness:

Witness:

For the Department of Agriculture.

It will be noted that here, as in the case of marketing creamery butter and eggs, the payment according to quality principle is made to apply and carried back to the initial producer, the farmer.

Mr. D. Morkeberg availed himself of the Department's poultry marketing service in connection with his buying and fleshing stations at Elnora and Markerville. The dressed poultry was marketed at Calgary and sold for 20.05 cents per pound for chickens, 15.91 cents for fowl, 15.88 cents for ducks, 16.07 cents for geese and 23 cents per pound for turkeys.

While, relatively speaking, the first season's business was not very large, the satisfactory results secured will probably encourage a gradual increase in poultry raising throughout the districts affected. There are many farmers with small flocks of poultry who could not, individually, place their surplus birds upon the market in properly fleshed, graded and packed condition but who can and will take full advantage of an outlet such as may be secured through the Department's marketing service or through some organization working along similar lines.

As a rule, the farmer prefers to dispose of his products locally, especially when he is assured of a quality market. In the case of the creameries operated by Mr. Morkeberg, such institutions seem to be in a very favorable position to handle their patrons' poultry as well as their cream and, to some extent, eggs. Buttermilk is one of the most valuable foods for the fleshing of poultry and is available in large quantities at most creameries. Suitable grain to complete the ration is usually obtainable locally at reasonable prices during the fleshing season.

IV.—GRADING OF CREAMERY BUTTER.

The demand upon the Department's butter grading service, which was described in the Report for 1914, became so great early in the season that it was found advisable to establish and operate a grading station at Edmonton in addition to the one that has been operated at Calgary for several years in connection with the butter marketing service. Suitable accommodation and good cold storage facilities were secured for the purpose at the Edmonton Cold Storage Company's plant and Mr. H. S. Pearson was placed in charge of the new grading station.

A total of 6203 churnings of butter were scored and graded during the summer months at Edmonton and Calgary by Messrs. H. S. Pearson, J. R. Flan and H. J. Donnelly, dairy produce graders. In most cases grade certificates covering the grade samples were handed to the shippers who afterwards turned them over to the firms who bought their butter. The Wholesale Produce trade in Western Canada are strong advocates of Government grading and encourage the creamery operators to make full use of it. Since the grading is being done upon a sample basis the Department assumes that the creamery operators, who avail themselves of the service, act in thorough good faith throughout in properly marking all packages to correspond with the grade samples. A breach of this

principle upon the part of any creamery operator should certainly terminate the service as far as he is concerned. I am pleased to acknowledge, however, we have no intimation from the trade of any creamery operator violating his agreement with the Department in connection with this matter. Under the terms of the agreement the Department undertakes to keep the grade samples in its possession, for at least four weeks in order to facilitate the adjustment of any dispute that may arise as between the shipper and the initial buyer in connection with the bona fides of any package of butter sold under grade certificate.

Following is the form used for the grade certificate:

Form D4.

No.

Department of Agriculture

ALBERTA

DAIRY COMMISSIONER'S BRANCH

Grade Certificate for Creamery Butter *

I have this day graded, as under, marked and placed in cold storage, one sample package of butter received from and branded.....

Max. Score	GRADE				REMARKS: —
	Special 94-100 Points	First 91-94 Points	Second 87-91 Points	Off under 87 Points	
Flavour	45				
Texture ...	25				
Salting ...	10				
Colour ...	10				
Package.....	10				
	<u>100</u>				
Points Given					Dairy Produce Grader.

* See circular of May 25, 1915, for conditions governing the grading of butter and issue of Grade Certificates.

The foot note printed upon each form has reference to the circular in which the general plan and scope of the grading service is outlined. The following quotation from the circular defines the grade standards:

Special Grade 94 to 100 points minimum for flavor 41 points
 First Grade 91 and under 94 points minimum for flavor 39 points
 2nd. Grade 87 and under 91 points minimum for flavor 37 points
 Off Grade under 87 points

REQUIREMENTS FOR SPECIAL GRADE

Flavor: Score 41 points and up to 45; fine, sweet, fresh and clean.
 Texture: Firm and fine; clear but not excessive, free moisture.
 Color: Uniform and correct shade, as required by market.
 Salting: Not too heavy, well dissolved, thoroughly mixed.
 Package: Clean, securely joined together, neatly branded; evenly coated with paraffin wax on the inside surface; good quality of parchment paper lining and print wrappers (when the latter are used) neatly arranged; packages of size and dimensions required by buyer, solidly filled, full weight; bright smooth surface."

V.—SEASON'S BUTTER SCORING CONTEST

The nature and object of this contest has been previously described in the annual report of the Department.

For the season of 1915 the following were the winning creameries and butter makers, their average scores and the awards presented by the Department:

Markerville	W. H. Jackson	95.81	Trophy and Gold Medal
Innisfail	W. Hanson	95.48	Silver Medal
Viking	J. J. Skalitzy	95.30	" "
Elnora	A. A. Munro	94.97	" "
Cardston	H. McIntosh	94.94	" "
Calgary Central	A. Seversen	94.71	" "
Carlyle Dairy Co.	A. Storrer	94.25	" "



DELEGATES TO DAIRY CONVENTION.

VI.—THE CONVENTION OF CREAMERY DELEGATES

This convention has become a permanent feature and a very potent factor in the general scheme of dairy development in Alberta. The various improvement measures that have been brought forward by the Department from year to year have first been laid before the convention for consideration and discussion and the delegates have never yet withheld their approval and hearty co-operation.

The Department invites, as delegates to the convention, the operators and chief butter makers of the several creameries in the Province and representatives of the produce trade. These men have, after all, been the guiding influences in the development which has reached in a very material sense practically every dairy farmer in the Province. Without their co-operation in the past the present state of development could not have been brought about. Future advancement, likewise, must depend very largely upon the continuance of that co-operation.

The annual dairy convention is a place where things are discussed in a neighborly sort of fashion, where the shortcomings of a competitor do not appear nearly so shocking as at a distance. On the whole, an annual gathering of the "clan" is a good thing for the business.

The convention was held in the Board of Trade rooms, Calgary, on December 15th and 16th, and was unanimously conceded to be the best yet. There was a good attendance of delegates representing creameries, cheese factories and creamery associations from Viking, Ryley and Edmonton in the North to Cardston in the South. There were also present several representatives of the wholesale produce trade of Alberta and British Columbia, of manufacturers and dealers in dairy and creamery equipment and supplies. The Press was also well represented.

The following programme of addresses and discussions was presented.

WEDNESDAY, DECEMBER 15, 9.30 A.M.

- (1) Opening Address; H. A. Craig, Deputy Minister of Agriculture.
- (2) Address; President Board of Trade.
- (3) (a) A review of the year's dairy business in Alberta.
(b) The Butter grading and marketing services of the Department of Agriculture; C. Marker, Dairy Commissioner.

WEDNESDAY, 2 P.M.

- (1) Viewpoints of the Buyer; Representatives from Wholesale Produce Firms.
- (2) Winter Dairying and Suitable Fodders; S. G. Carlyle, Supt. Demonstration Farms, Department of Agriculture.
- (3) Grading up a Dairy Herd; G. H. Hutton, Supt. Experimental Station, Lacombe.

WEDNESDAY, 8 P.M.

- (1) Address and Presentation of Prizes, Provincial Butter Scoring Contest, Season 1915; H. A. Craig, Deputy Minister of Agriculture.
- (2) Presentation of Trophy, Butter Exhibit; John Burns, Esq.
- (3) Address (illustrated); Geo. H. Barr, Chief, Dairy Division, Ottawa.

THURSDAY, 9 A.M.

- (1) Judges' Report on Exhibits.
- (2) Pasteurization of cream for buttermaking; Geo. H. Barr, Ottawa.
- (3) General discussion on the care and handling of cream on the farm and the grading and grade standards of cream.
- (4) Next Year's Work; C. Marker.

Mr. H. A. Craig, Deputy Minister of Agriculture, formally opened the convention. In welcoming the delegates and all others interested he said that the Department was fully alive to the fact that more and better dairying would mean more business and better economic conditions in the Province generally. He assured them of the continued active co-operation of the Department in the development of the dairy industry.

Mr. J. A. Valiquette, President of the Board of Trade, welcomed the delegates on behalf of the business men of the city. He said that the happiness and prosperity of the urban population depended upon the happiness and prosperity of the farmers and that any agency that helped to promote that prosperity would have the very best wishes and support of the body of men whom he represented.

REVIEW OF THE SEASON'S WORK.

C. Marker, Dairy Commissioner, explained that the convention had been called by the Department to consider the year's work of the creameries in the Province, to present certain addresses and discussions and to crystallize the experience thus gained and the lessons learned into some definite line of action that would lead to further improvement.

He said that the creameries are the channel through which the surplus dairy product of the farm will find its way into the larger and

more profitable markets in steadily increasing proportions. The Department realizes that the efficient conduct of the creamery business is of immediate and very real concern to the dairyman on the farm.

The statistical and other data used in the review are presented elsewhere in this report and need not, therefore, be repeated here.

In complimenting the creamery operators and butter makers of the Province upon the general and marked improvement that has been made during the past season in the quality of the butter production, particularly in the workmanship, evidence of this improvement was freely offered by representatives of the wholesale produce trade who attended the conference at Vancouver, to which reference has already been made. Written messages received from others who were not at the conference emphasize the same point. So, while substantial progress has been made, several problems remain to be dealt with. Some of these were brought out in the discussion at the Vancouver conference. The more prominent ones are the lack of keeping quality in western made butter as compared with the best imported product, and also the lack of uniformity in the form and general make up of the packages used. Both of these defects are capable of being remedied and should have the earnest and immediate attention of every creamery operator. A better keeping quality may be secured only through further improvement in the quality of the cream as delivered to, and in the handling of it after it has reached, the creameries.

The improvement in the quality of the cream can only be brought about on the farms where it is produced. There is a great deal of field work to be done and during the winter that is now before us a general campaign ought to be made for more cooling material and for better cooling facilities on the farms. Other conditions being equal, properly cooled cream will always reach the creamery in better condition than cream that has not been cooled. As for the handling the cream at the creameries, the development of too much acidity should be avoided in the ripening process. In the Department's marketing and grading service during the past season it was found that, almost invariably, the butter that had been churned from pasteurized cream with a low acidity had the best keeping quality. The speaker was of the opinion that the time had now come when the creameries should adopt the pasteurization of cream for butter making, in order to secure keeping quality in the butter. Mr. Geo. H. Barr, Chief of the Dairy Division, Ottawa, had kindly consented to attend the convention and give the results of some experimental work that had been conducted by his Department along the lines of pasteurization of cream.

Regarding the criticism of the packages, there should be no difficulty in meeting the wishes of the trade through the adoption and use of a standard box such as the produce men want.

In concluding, the speaker referred to the good work that was being done and the marked progress made in the Provinces of Saskatchewan and Manitoba in the development of their dairy industry and urged the dairymen of Alberta to stick to their text: "All as good as the best."

ADDRESS BEFORE THE DAIRYMEN'S CONVENTION

BY H. A. CRAIG,

Deputy Minister of Agriculture.

GENTLEMEN,—The Live Stock industry has always been paramount in this Province. Until recent years the cattle business was confined very largely to the raising of beef. Within the last few years, however, the raising of dairy cattle and the development of the dairy industry has made remarkable progress.

DEMAND FOR ALBERTA BUTTER.

We may look for a time in the near future when the dairy products of this Province will be among its greatest sources of wealth: in fact this industry is fast approaching this condition at the present time. Our Province is eminently suited to the requirements of the dairy industry, in that we have land which will produce a large amount of feed, and also owing to the fact that we have a large market in the neighboring Province of British Columbia. It is not news to most of you that New Zealand sends to the coast cities very large quantities of butter each year, and that this butter comes into direct competition with the Alberta product. Furthermore, that New Zealand butter has a reputation in the coast market which has given it the advantage in price over the Alberta butter of several cents a pound. When visiting the coast a few weeks ago, however, I found that the Alberta product is very much more in favor than it was two or three years ago, thanks to the efforts of the butter makers of the Province, and to some considerable extent, at least, to the efforts of the Dairy Commissioner and his staff. While there is no doubt that there was a basis for the reputation which New Zealand has established in years gone by, we believe at the present time that the Alberta product is on an equal footing and that any prejudice now existing is largely due to the fact that the better product of recent years has not yet been able to wholly overcome the reputation established by the poorer product sold in years gone by.

BUTTER AND CREAM IN GRADE.

I would like to impress on the dairymen present the very great importance of turning out a first class sample of butter in every churning. I am quite aware of the fact that it is not always the fault of the butter maker that his butter does not grade number one. In many instances he is supplied with inferior cream, from which it would be impossible for the best butter maker to make good butter, but the farmers of our country are fast becoming educated since cream in most cases is paid for on grade, and I know of no better way to educate people than to make them pay for their mistakes in cold hard cash. Since butter has come to be sold on grade, and as a natural consequence since cream is come to be paid for on grade, it is marvellous the change which has been wrought in the dairy business in this Province. Factories which three years ago were sending 90% of number two grade butter to our station in Calgary are today sending 95% of first, some specials and practically nothing off grade. I know of instances where the loan on creameries has been paid off by the extra price which the butter makers secured by having made extra special grade of butter for the season, and the money received over and above number one grade in the course of five years paid off the loan entirely from the creameries. In such cases as these it costs the farmers practically the same amount to produce cream which would make extra special butter as it did to supply the cream which produced number three or off grade butter.

Aside from the extra price which can be secured for the best butter it is possible to establish a reputation for the product which naturally means wider markets and consequently better prices for all butter.

I take it that most of the people at this meeting are familiar with the system of grading as carried on by Mr. Marker's office. For the sake of those who have not a knowledge of this work I may outline it in brief.

GRADING AND MARKETING SERVICES.

A cold storage is maintained in Calgary by the Dairy Commissioner, and those who wish butter to be marketed through the Department forward their output to this depot. It is here graded by an expert from the Department and may be sold immediately if the market so warrants, or may be held in cold storage until prices are more favourable. During the present year a considerable share of the product has been marketed in this way, a large proportion being shipped to British Columbia and the Yukon. Besides this the dairy commissioner has arranged that any butter factory operating in the Province may send a sample of each churning to the Calgary grading station or to a similar grading station established in Edmonton. These samples are scored by a competent man and a certificate returned to the owner of the butter. The large purchasers are familiar with the system sufficiently so that they purchase on this certificate without even seeing the sample.

The Department is particularly pleased that so many of the butter factories both large and small have taken advantage of this system. We believe that it is of immediate advantage to those who have marketed their butter in this way and also that there is a greater advantage in bringing the butter of the Province up to uniform standard, because in this way only can a reputation be established in the product on the larger markets. It is important for the creameries of the Province to co-operate with the Department of Agriculture in the campaign for better butter. As I stated earlier, a very large proportion of the revenue of this Province will in future be derived from the sale of dairy products. It is also important that the butter makers do their share in seeing that the very best possible product is placed upon the market.

THE SILO.

The producing end of the dairy business has been laboring under some difficulties in the past, and we are glad to know that some of these difficulties at least have been surmounted. The problem of securing both summer and winter feed for dairy cattle has been a serious one. However, with the introduction of forage crops, such as winter rye and oats sown for pasture, with the growing of some roots and with the advent of the silo, we feel that in the future the feeding problem will not be as serious as it has been in the past. It is not my purpose to deal with the feeding problem further than to mention the fact that the Demonstration Farms of this Province have had considerable success with silos. Corn has been grown fairly successfully for some years on three of the farms and ensilage has been made from this corn, which while not as palatable as ensilage made from corn in Eastern Canada and the United States, is still relished by the cattle and furnishes succulent feed which cannot otherwise be supplied. However, it is not possible for corn to be grown with the same success in all parts of the Province. This year the Department erected a silo on the Olds Demonstration Farm, where green oats has been used for ensilage. This is being used to feed a dairy herd at the present time, and is being relished by them practically as well as the ensilage made from corn on the other farms. In some of the other silos we have mixed alfalfa with corn and green oats.

Looking over the whole field of our dairy interests we can safely say that we have registered progress in production, manufacture and marketing which should give us encouragement for the coming season.

FROM THE VIEW POINT OF THE TRADE.

Under this head addresses were given by Mr. N. Larsen, of P. Burns & Co., Ltd., Calgary, and Mr. R. Robertson, of Robertson, Morris & Co., Ltd., Vancouver. In introducing the speakers the Chairman said that the dairymen of Alberta were always ready to listen to and act upon the advice of the men who represent and interpret the requirements of the consumer at the other end of the line. While we appreciate the commendation of the trade we should value even more any helpful criticism that the speakers may choose to make. They are produce handlers of many years standing, and understand thoroughly their subject from the manufacturing point, as well as from the market point of view.

MR. N. LARSEN said:

I am glad to say that the general improvement in the quality of creamery butter in Alberta during the last two years has simply been marvellous. The greatest progress is noted in flavor and aroma and texture. Although good progress has been made in salting, coloring, packing and weight, here is a point where there is room for a good deal of improvement and standardizing. The majority of the creamery operators and butter makers have, much to their credit, concentrated their attention on the improvement of flavor, aroma, and texture, and have achieved good results. In this connection, it may be said that great credit is due, also, to the farmers (cream shippers), for having responded so well to the demand for clean and sweet cream. As to the current season's supply in particular, it may be said that while a good proportion is coming forward with a clean, sweet flavor, and a mild, aromatic acidity, there is still a number of the smaller country creameries which do not quite master the problem. Somehow the cream gets too far advanced, and too much acidity is developed in the cream before churning. The future aim must be to reduce the acidity of the cream to secure better keeping qualities. This is a most important requirement in order to make it possible for the trade to handle cold storage butter with greater satisfaction than heretofore. No doubt the pasteurization with subsequent propagation and pure lactic acid ferments to the desired degree is the means to obtain this result. As to salting, while there are still a few people who prefer a rather heavily salted butter, the great majority of customers are asking for a medium to mild salted butter, whose sweetness and aroma are not covered up by salt. Therefore, I may say that we are still receiving far too large a quantity of oversalted butter. In this connection I may mention that a medium to a mild salted butter will undoubtedly stand cold storage better than heavily salted butter, because the former will freeze solid at about zero, whereas the latter will require 10-20 below zero to freeze the strong brine. Speaking of color, most of the creameries are this year paying more attention to this matter. While we now and again may receive a shipment of overcolored, or reddish colored butter, this is not nearly so frequent as it used to be. However, there is still far too large a number of the creameries whose butter is mottled, uneven in color, streaky, red or white lumps. In several cases when cut into bricks the butter looks like a piece of marble, and has to go into the churn again. This fault nearly always emanates from the salt. It may be poor salt, or most frequently the salt is not allowed sufficient time to dissolve properly before working is finished. If the salt is worked evenly into the butter, the churn closed up and left

standing for say one hour, the salt will dissolve into a brine and can be worked thoroughly into the butter. By this method the uneven color will practically disappear. Then there is quite a prevalent nuisance we have to contend with—when the butter maker is so careless, or perhaps careful, that he scrapes both churn and worker and gathers lumps of butter which have not been worked, in order not to waste anything, he will throw this into a box. This will make quite a different color, and often 25% is spoiled and has to be reworked to a lower grade. Also, so far as possible, it should be avoided to put butter from two churnings into one box. They will nearly always show two shades of color. Regarding packing and weight, of course we still receive a number of boxes not complying with the standard size, 13 x 13 x 10, but the creameries are gradually coming along, and I hope that next year there will be nothing but standard boxes. The weights seem to be one of the most difficult points. While a good many ship 56's full net weight, there are still too many who will pack any weight from 53 to 59 lbs. in the box. This simply has to be standardized so any and every box from all creameries contains 56 lbs. full net weight, and will stay there till it reaches the buyer who cuts it up, even if this should be 3 or 4 months later. This must be complied with to gain confidence of the trade; the margin of profit does not allow the cost of checking weight of every box. Also, the churning lot numbers should invariably be marked on all boxes, so inspection of one box of every lot would be sufficient. Several creameries do not put these numbers on the boxes. Before closing I would like to suggest with regard to weight, realizing that perhaps several creameries have not got proper scales, that somebody take it upon themselves to find a scale suitable for weighing 56 lbs. of butter. This scale, I think, should be an even balance beam, with a marble or glass plate on one side, and a plate for a 56 lb. weight and crass weights (Sizes) for allowance for shrinkage on the other side. The empty box should not be weighed tare, but the 56 lbs. of butter and allowance should be carefully weighed on this scale, and then packed in the box. By this method, there would be no room for mistakes, and I feel confident it would give universal satisfaction.

MR. ROBERTSON said:

"It must be very gratifying to you here in Alberta to find the position you are now occupying in the dairy industry. I think that within the next year the Provinces of Alberta and Saskatchewan will control the Western market. By Western market, I mean your own local trade and that of British Columbia. The importation of New Zealand butter into British Columbia in 1915 was less than one-half of what it was a year ago. I think the figures for 1914 were 5,500,000 lbs. and this year the imports here have been a little over 2,000,000 lbs. I do not see any reason at all why you should not supply the trade of British Columbia, and very satisfactorily. Within two years, if you continue to improve as you are now doing, you should be able to capture the Coast market and hold it. There is no reason why you cannot, if you satisfy the taste of that market. There is no reason in the world why a pound of butter should have to be imported into British Columbia from foreign countries. The Alberta product is certainly improving and even today some of your best makes are very close to the New Zealand standards. When you satisfy the fine taste of the Vancouver market you can do it on the London market as well. I am glad Mr. Larsen drew your attention to the matter of keeping quality. I think that you will not get good keeping

qualities in your creamery butter until you pasteurize the cream. That seems to be the unanimous impression of the trade and the problem must be faced.

The fact is that New Zealand comes on about October with first class fresh made butter. You have then got to compete in the British Columbia market against fresh made butter. The stored Alberta product must be very good to compete with fresh made butter. Work the butter along the line of keeping qualities so that it will hold up its flavor and be able to compete with this fresh made butter brought in from New Zealand. Then you can get the Coast market entirely both winter and summer. I am very glad to see the increasing make in the Alberta product.

Alberta should occupy a very prominent position in the world in the line of dairying. There are few other parts of the world so favorably situated when we consider the climatic conditions, the splendid feeds and abundance of it, the natural springs all through the Province and the very mild winters. You have everything in your favor and you are going to occupy that position in a very short time if you go ahead with the strides which you have made in the past couple of years. I wish you continued success.

A spirited discussion followed these addresses and the question of packages suitable for the Western market was fully discussed. One delegate asked whether the use of standard packages could not be made compulsory and the answer was given that the compulsion would come from the trade in the shape of a discrimination in the grades and in the price in favor of the right sort of package.

FEEDING THE DAIRY COW.

BY S. G. CARLYLE.

Superintendent Demonstration Farms.

Keeping the cow well fed is one of the first principles of dairy farming; a starvation diet is not for the producing cow.

It is estimated that two-thirds of our dairy cows are unprofitable. This does not indicate that they are poor cows, but it does indicate that a great many of them are poorly fed. The secret of manufacturing milk profitably is to feed the cow abundantly the raw material from which the milk is produced. When we know that it consists of water, protein, carbonhydrates, fat and mineral matter, and that there never was a pound of milk made by a cow except from feed that she has eaten, it can easily be seen how important it is that she be provided with large quantities of food containing these constituents.

FOOD CONSTITUENTS AND BODY CONSTITUENTS.

But if the cows are to be economically fed, care must be taken that these constituents are fed in the proper proportion. To make this more plain—if we analyse the cow's body we will find that it is composed of the same constituents as milk. The animal body contains water to the extent of 50 per cent., and milk contains water to the extent of 87 per cent. This is the reason why water should be supplied regularly and in large quantities. There are nearly 200 pounds of protein in the body of a 1,000 pound cow, and in 100 pounds of milk there are between 3 and 4 pounds of protein; and she requires about .7 of a pound of digestible protein to maintain her body. This is why cows fed on feeds deficient in protein do not give satisfactory results at the pail. Protein is an important body constituent, an important maintenance constituent and an important

constituent of milk. Carbonhydrates and fats are both used for the same purpose, that is, to supply heat and energy. Seven pounds are needed each day to keep the animal in good working order, the rest is made into animal fats, which are put into the pail or distributed through the body to be used later. In 100 pounds of milk there are generally from 3 to 6 pounds fat, and about 5 pounds carbonhydrates in the form of milk sugar. From this it will be seen that of all the nutrients carbonhydrates are the constituents that are most largely used. Over 5 per cent. of the animal body and .7 to 1 per cent of milk is composed of mineral matter. This is why young animals, and also cows giving large quantities of milk, should be salted regularly and should be given feeds containing a liberal supply of ash or mineral matter.

Experiments have shown that to produce a maximum amount of milk cows should be fed on a balanced ration, that is, the digestible nutrients, having a nutritive ration of 1 to 5, meaning 1 part protein to 5 parts carbonhydrates. Some heavy producers require a narrower ration, probably 1 to 3 or 4, while others do just as well on a somewhat wider ration, 1 to 6 or 7.

VARIETY NECESSARY.

Cows should not only be fed protein and carbonhydrates in the right proportion, but these feeds should be palatable, digestible and bulky, and as succulent as it is possible to get them. The cow also relishes and does better on a variety of feeds. The problem confronting the dairyman in this Province is to supply variety and succulence through the long winter months.

The feeds that are generally used by the dairyman in this Province, after the cows are stabled, are for roughage: oats or green-feed, prairie hay and in some parts timothy hay; concentrates, ground oats, barley, frozen wheat, bran, and flax or oil cake; and some are provident enough to grow a few roots to provide succulence. A beginning is likewise being made in furnishing ensilage.

ROUGHAGE.

Our rough feeds are high in carbonhydrates, and low in protein, green-feed having about 9 pounds protein out of every 100 pounds, prairie hay 6 pounds, and timothy hay $5\frac{1}{2}$ pounds; but of these amounts only about half of the protein is digestible. If alfalfa can be grown, as I believe it can over the greater part of this Province, and as it already is in places, it will do much to balance the rough feeds. Alfalfa contains about 14 pounds protein out of every 100 pounds, of which 10 pounds is digestible.

CONCENTRATES.

But if we are to get the best results some concentrates must be fed, because a cow cannot consume enough of the rough feeds to produce a large amount of milk and she will not get the variety to stimulate her appetite. The concentrates grown in this country are fortunately high in digestible protein, besides being very palatable. Oats is one of the most largely grown crops in the West. It is one of the best feeds for any kind of stock, and is especially good for the dairy cow. It is bulky and palatable and though containing a larger percentage of indigestible material than the other grains, owing to the heavy hull, it also contains a larger percentage of digestible protein and fat and has a nutritive ratio of 1 to 6, which, according to chemical analysis, is almost a balanced ration. Oat feeding is especially beneficial in fitting cows after they are dry for next year's work, and this is where many dairymen fail in not getting cows in

good condition before freshening. As soon as a cow dries she should be fed liberally on feeds high in protein and fat, such as oats, bran, and oil meal, to store up future energy for herself, and also to develop the unborn calf.

Another feed largely grown in Western Canada and which should be given more attention by the dairyman is barley. Barley according to analysis, is very similar to corn, and for this reason forms a large part of the fattening hog's ration in this country. However, it can be fed very profitably to dairy cows but should only be fed in limited quantities, because like corn and other heavy, compact feeds lacking bulk, it is harder to regurgitate for remastication, consequently it is not well mixed with saliva. The ptyalin contained in the saliva acts upon the starch, changing it into sugar and leaving it in condition so that the other digestive juices can further work upon it. Barley adds variety and is very valuable ground and mixed with more bulky feeds, as ground oats and bran. It is highly digestible, containing 75 per cent. digestible nutrients against 66 per cent. in oats. It is lower in protein and fat, but higher in carbohydrates.

Wheat is valuable for feed for dairy cows but on account of the high value placed upon it for human food, is not much used. Shrunken and frozen wheat is plentiful some seasons and can therefore be profitably utilized. Wheat is equal pound for pound to barley, and should occupy the same place in the ration. But the great value of wheat for feeding purposes is in its by-products, of which bran is the most important to the dairyman. Bran is not so highly digestible as some of the other feeds, but is extremely valuable for its physical qualities, being bulky and palatable, and it has a cooling effect upon the digestive system. It also has a laxative effect, owing to the large amount of phosphorus or mineral matter it contains. It contains only 56 per cent. of digestible nutrients and would be an expensive feed were it not for the properties already mentioned. However, it is high in digestible protein, containing 12 per cent.

Another feed worthy of mention is flax, but on account of its containing a large percentage of oil it is rather expensive. Like wheat, its chief value as a dairy feed is in its by-products, the chief of which is oil meal. This feed also has a high physical value, especially when animals are fed on dry feeds, in keeping the digestive apparatus in healthy working condition. It is highly digestible and contains a larger amount of protein and fat than any of the feeds spoken of. It contains about 30 per cent. protein and 6 per cent. fat, and for this reason should only be fed in small quantities in conjunction with bulky feeds.

Rye is another feed grown extensively in the West and has a high value for fattening hogs. It is carbonaceous in character and is palatable, but its chief objection in the dairy ration is the disagreeable flavor it imparts to milk and the bitter taste it develops in butter, if fed in any considerable quantity. The danger from it is the likelihood of ergot being present, which causes abortion. The best way to use it for dairy cows is to sow it for pasture in the month of July. It will be ready to carry stock by the middle of August or first of September, thus supplying green, succulent feed when the other grasses are dried up. It also comes on early in the spring and can be pastured up to June, the cattle taken off when the rye starts heading out to escape the effects of ergot which may be present. It likewise gets a bitter flavor at this time which is not relished by cattle. The rye can either then be cut for hay, left for grain or plowed down.

SUCCULENT FEEDS.

The greatest drawback to winter dairying in the West up to the present is the absence or scarcity of succulent feed. The feeding of dairy cattle for profit is necessarily high feeding and it is absolutely necessary that a suitable proportion of the food should be succulent, cooling food in order to promote the right functioning of the dairy animal's organism and conserve the health. This is a great lack in our feeding of practically all kinds of live stock in the Province. Green-feed, which is the feed used in greatest quantity in the Province and with many is made to do duty for roughage, concentrates and succulence altogether, has some quality of succulence perhaps in the fall but certainly becomes the driest of rough feeds in the spring just when the cows are coming in. This is the time above all when succulent feeding is necessary in order to establish and sustain a heavy flow of milk. It may be accepted as an axiom that there is no profit in being in the dairy business unless we are prepared to put in a good supply of succulent feed. I have no hesitation in saying that the manufacturing and marketing interests of the business have gone ahead of feeding and selection and these interests have to be absolutely taken care of by the farmer himself.

The succulent feeds available are roots and silage. Roots can be grown successfully in all parts of the Province. The chief drawback to their larger use is the cost of cultivation and handling. Their value, however, in the health of cattle cannot be measured by their absolute food value simply. Corn has proved a success in many parts of the Province and where it can be grown it is an economical and valuable crop on account of its quantity and quality. In some parts of the Province, for example, on heavier and moister lands towards the west and north it is not so successful. This, however, does not put silage out of the question. On one of the Demonstration Farms the Department built a silo and filled it with green oats cut in the milk stage. This has cured well and is furnishing large quantities of succulent feed for the stock. The phenomenal success of the oat crop in Alberta points to its being one of the important ways by which the milk producer is going to introduce summer feeding into hard midwinter. On the best characteristic oat land from seven to twelve tons of green oats per acre can be grown.

Where corn can be grown, however, it has an important advantage over oats in relation to the general crop scheme. On account of the few roots grown there is a rather small proportion of cultivated area each year in the farm rotation. Where corn can be grown this area is considerably increased.

GRADING UP A DAIRY HERD

BY G. H. HUTTON, B.S.A.

Superintendent of Experimental Farm, Lacombe, Alta.

The main facts in connection with animal breeding are so well understood that it would seem almost a waste of time to give consideration to the advisability or importance of using pure-bred sire in animal breeding. Talks on the importance of this work have been so frequently given that apparently the minds of those for whose benefit the questions are given consideration, have become so calloused that the reception of

the ideas submitted is rendered difficult. Those who should benefit cast aside the ideas as being of little importance and the product of the minds of those whose business it is to prepare such articles.

INCREASING AVERAGE PRODUCTION.

That this is the case is shown by the fact that the improvement in the annual output of the dairy cows in Alberta is so slow. Had the vital truth of statements similar to those I am about to make in regard to the possible improvement of dairy cattle been grasped and acted upon by the farmers interested in dairying in this country, we should have had in Alberta an average production of from five to six thousand pounds per annum instead of thirty-eight hundred pounds with which we are apparently content, and which represents the brains and intelligence given by dairymen of the Province to this question. It would appear then that the average dairyman is not exercising his brains to bring about improvement. I would be glad if it were possible for me to so emphasize the practical possibilities of improvement that every man who keeps cows for the production of milk would be induced to adopt those practises which would bring about such improvement. Why should the average man be content with the production of thirty-eight hundred pounds per annum from his cows when he could without proportionate extra expense as to feed be getting six thousand and even more than that? By extending his ideals he could reach a maximum of ten thousand pounds per cow per annum. Why do we work year after year to produce feed for the thirty-eight hundred pound cow? It seems to me that the same ambition which rendered the settler of this Province dissatisfied with conditions in the Province or State from which he came, should also force him to reach out for the sort of animal that will produce two or three times the present average output of Alberta's dairy cows.

DAIRYING AND HOME-MAKING.

Here we have a soil which is enriched by the stored up energy of generations of plant growth and is so remarkably productive that this year we are hearing reports and witnessing the actual yields of grain which will be considered impossible by many farmers who are residents outside this fertile area which is designated Alberta. If then we have such a fertile soil, should it not be the aim of every farmer to keep cows whose possibilities for production are as great as the land on which they are kept. The keeping of cattle of this class would enhance the cash returns and would insure the continuance of the fertility of the land up to the present high standards. Thus the productive soil which we now have and the high producing cows which it is our privilege to secure, would establish our farmers on the land and enable them to build up homes on the farms that would be handed down to the generations as a heritage of which each successive generation might well be proud. This idea of home-building on the land is one which strongly appeals to me as I believe it is an idea which must be more firmly planted in our minds else we will have a depleted soil and a changing agricultural population and will not have that pride in agriculture, that permanence in our home-building, that consideration for beautifying these homes and making them attractive which will tend ultimately to establish in Alberta the type of citizenship which will do more for the Province than any oil boom or any other of our natural resources, however genuine or valuable. Our trouble seems to have been that we have been searching for something which has been

hidden and have failed to realize that the country's greatest wealth consists of our rich soil which requires only a small investment for its profitable development.

THE BOARDER COW.

I wish to present to you some figures we have secured at the Experimental Station, Lacombe, which go to show the improvement which can be brought about in dairy cattle by careful breeding.

Nominally, men are supposed to keep cattle for the profit they get out of them, but in reality many must keep them for the privilege of associating with cows. Where the average production is only thirty-eight hundred pounds it necessarily means that there are many cows in the Province that do not produce twenty-five hundred pounds and the cow which is milked for the whole lactation period and during that period produces only twenty-five hundred pounds is not a profitable cow. She is a boarder and every year she is kept means a loss and the man who keeps her must charge up a great deal to her credit because of the fact that she keeps him from being idle and so keeps Satan from finding mischief for his otherwise idle hands. This is about the only way in which I know a profit could be figured for a great many cows which our Alberta dairymen are providing with bed and board.

THE TEST OF BREEDING.

As I have stated, we have some figures here which show what can be done to remedy this state of affairs. We have here three charts giving the production of three herds of dairy cattle. The first chart shows the production of cows which were purchased with the idea of securing a herd which would represent a common dairy herd. This herd is, however, not so common after all, as the average production is about three thousand pounds higher than the average production of the Province. The high grade herd of Holsteins under the same conditions of feed and shelter produced in the same number of days over two thousand pounds per head more than the common herd, while the pure bred herd produced about thirty-two hundred pounds more during the lactation period, averaging the same number of days.

THE GRADE HERD.

In order to amplify the figures here presented, we have had under way during the past two years an experiment to further show the importance of breeding, in increasing the production of dairy cattle. This common grade herd is being bred to a pure bred Holstein bull, whose dam has a record of eighty-six pounds of milk per day for thirty days, testing an average of four per cent. fat. As he is a grandson of Pontiac Korndyke there are many cows in his pedigree showing a production of more than thirty pounds of butter in seven days. His own immediate dam has a record of only slightly under thirty pounds in seven days. A bull whose pedigree shows such a large number of high producing dams as this one should prove prepotent and we are hoping that with such a bull constituting one side of our herd and with these cows whose average production for the last year was between six and seven thousand pounds constituting the other side of the herd, we will secure some figures showing exactly what advantage a pure bred bull will have when used on

individuals whose records run from three thousand pounds upwards. We expect to add additional demonstrative testimony to the advantage of use of a pure bred sire on our common cows.

The first chart shows the production of the common grade herd and all of the animals of this herd are matured cows. It will be noticed that the records show extreme variation, a variation much greater than will be seen in the two other herds, which have the advantage of both breeding and selection. Cow number 4 in this herd has a record as you will see of only slighter better than three thousand pounds, but she gave about nine hundred pounds of this total production in the first thirty days. Had we not been weighing the milk this cow's fairly liberal production on the beginning would have resulted in the impression that she was well worth keeping. These figures illustrate the truth of the statement that an intimate knowledge of individual production could be obtained only by weighing and by testing the milk from each individual in the herd. The use of the scales—the "weighing in the balance" of the product of each cow—is the only means of arriving at a true estimate of the individual worth of each animal. By adding to a knowledge of quantity, information as to quality by the use of the Babcock Test at least once a month, the commentary as to merit is complete as far as production influences profit. The records of feeds consumed will then furnish full data for guidance.

THE HIGH-GRADE HERD.

Let us now turn to the chart showing the production of the high grade Holsteins as illustrating the evolution which may be brought about by the use of good bulls. Of course, as you will notice, the lactation period is longer in this case than in the case of the other herds whose records are shown on these charts. This long lactation period is explained by the facts, first that these were heifers with their first calves and we therefore wished to establish in them the long milking habit, and second, we wished to hold them over for calving the second time this fall. We are willing to concede that the long lactation period gives these heifers a distinct advantage over the other herds, but not sufficient advantage to lower their record below favorable comparison with the common grade herd.

THE PURE-BRED HERD.

In the pure-bred herd there is one mature cow whose record is shown. The lactation period is about average and yet though nearly all the animals whose records are shown are heifers, the average production for the lactation period is 10013.9 pounds, with an average per cent. fat of 3.18. Had the records of the high grade heifers been computed for the same length of time, the production would have been 8,649 pounds and the production of the three herds would then stand as follows: the common grade herd, 6,885.7 pounds, the high grade herd (for the same length of lactation period) 8,649 pounds, and the pure bred herd 10013.9 pounds. These figures carry greater weight than any argument or general comment which could be made in favor of the use of pure-bred sires.

By careful selection of the head of our breeding herd, by careful weighing and testing the milk from each cow in the herd, our dairymen will rapidly change the figures showing the annual production of the dairy cows of Alberta by increases of 25, 50 and even 100 per cent. "Let us slumber not in the tents of our fathers. The world is advancing."

RECORDS OF COMMON GRADE CATTLE AT THE DOMINION EXPERIMENTAL STATION, LACOMBE.

No. of Cow	Freshened		Pounds Milk	Butter fat
Grade No. 1.	January	13th, 1915.	260	6418.8 3.6
Grade No. 5.	March	13th, 1915.	293	4993.9 4.4
Grade No. 4.	May	20th, 1914.	166	3011.3 4.0
Grade No. 7.	March	2nd, 1914.	573	12506.4 3.9
Grade No. 30.	July	17th, 1914.	440	8493.4 4.0
Grade No. 31.	May	2nd, 1914.	383	4988.8 3.6
Grade No. 33.	December	24th, 1913.	341	4401.3 3.0
Grade No. 34.	December	27th, 1913.	613	10272.2 5.2
	Average			6885.7 3.5
	Average No. of days in Lactation Period			341
	Average Pounds of Milk per day			20.1

RECORDS OF PURE BRED HOLSTEINS AT THE DOMINION EXPERIMENTAL STATION, LACOMBE.

Name of Cow	Freshened		Pounds Milk	Butter fat
Daisy Johanna Ormsby	October	29th, 1914	343	10605.0 3.4
Lawncrest Lee Beets	May	5th, 1914.	338	13824.2 3.1
Lawncrest Rosa Echo	June	6th, 1914.	318	10240.0 3.3
Lenore Del Berke Star	March	23rd, 1914.	381	10091.1 3.4
Maud Sarcastic	March	2nd, 1914.	230	7233.8 3.0
Nina Gem Lutske	April	15th, 1914.	301	12038.8 3.1
Princess Margaret Helbon	May	14th, 1914.	504	10814.3 3.1
Rhoda DeKol Beets	September	10th, 1914.	269	7364.2 2.8
Vrouka B. 3rd.	August	13th, 1914.	335	7914.5 3.5
	Average			10013.9 3.18
	Average No. of days in Lactation Period			335
	Average Pounds Milk per day			29.5

RECORDS OF HIGH GRADE HOLSTEINS AT THE DOMINION EXPERIMENTAL STATION, LACOMBE.

No. of Cow	Freshened		Pounds Milk	Butter fat
Grade No. 11.	December	7th, 1913.	594	13319.5 3.7
Grade No. 12.	April	19th, 1913.	499	13635.8 4.2
Grade No. 13.	March	31st, 1914.	403	8430.2 3.8
Grade No. 14.	January	12th, 1914.	478	10361.4 3.4
Grade No. 15.	December	22nd, 1913.	517	11997.6 3.9
Grade No. 17.	December	11th, 1913.	569	10201.2 4.4
Grade No. 18.	December	1st, 1914.	304	7198.1 3.5
Grade No. 19.	February	4th, 1914.	457	8276.1 3.4
Grade No. 20.	March	17th, 1914.	533	13528.2 3.7
	Average			10772.0 3.7
	Average No. of days in Lactation Period			483
	Average Pounds of Milk per Day			22.3

PASTEURIZING CREAM FOR BUTTERMaking.

BY GEO. H. BARR,

Chief of Dairy Division, Department of Agriculture, Ottawa.

May I ask the question, are consumers of butter in Canada demanding a finer quality of butter each year? If they are, what are the creamery men doing to meet the demand? I believe the methods of operating the creameries in Alberta are the most up-to-date in Canada, yet I think you will admit that there is still room for improvement in the quality of the butter.

In this Province you are grading the cream and paying for it on a quality basis. This, I believe, is the best known method of improving the quality of the cream at cream gathering creameries and it is and has been

the means of producing a sweet, clean flavored grade of cream and fine flavored butter. Does this butter, however, fill the requirements of the trade in every particular?

No one has been more pleased than I have to see the progress that dairying is making in Alberta and also the splendid improvements being made in the quality of butter from year to year, but from what experience I have had in making butter from raw and pasteurized cream, I always had it in my mind that some day Alberta creameries would have to pasteurize the cream if they would make the finest keeping butter. Remember, I say keeping butter. I believe for immediate consumption there is nothing so pleasant as butter made from clean, well-ripened raw cream. Some of your customers are, however, thousands of miles distant and the butter is made weeks and sometimes months before it is placed on the table. It is therefore, necessary that the bacteria in the butter be absolutely pure when it is made and packed. This can be most successfully accomplished by destroying all undesirable germ life in the cream by pasteurization and then introducing the proper bacteria by adding to the cream a pure culture. This is easier to put on paper than to work out in a cream gathering creamery, principally on account of the difficulty in securing milk for making culture. The best method I know of to get uniform and reliable results in a culture at cream gathering creameries is to make the culture from skim milk powder. Using 10 per cent. of this culture will cost about half a cent per pound of butter, which is rather expensive.

The following figures are the results of experimental work conducted by the Dairy Division several years ago and show the score on the flavor of the butter. The cream was thoroughly mixed when delivered at the creamery and then divided into four different lots and treated as stated in the following table. Ten per cent. of skim milk powder culture was used and the pasteurizing temperature was 175 degrees.

	Score on the Flavor of the Butter	
	When Fresh	When 4 Months Old
Sweet Cream		
Raw	42.33	39.05
Raw, with 10% culture	42.66	39.77
Pasteurized	43.16	40.05
Pasteurized, with 10% culture	43.00	40.10
Sour Cream		
Raw	41.83	38.94
Raw, with 10% culture	42.33	39.17
Pasteurized	42.91	39.77
Pasteurized, with 10% culture	43.08	40.05
Sour Tainted Cream		
Raw	40.50	36.11
Raw, with 10% culture	41.66	37.44
Pasteurized	42.08	38.88
Pasteurized, with 10% culture	42.33	39.16

These experiments show that the use of 10 per cent. of culture in the pasteurized cream gave slightly better flavored butter than pasteurized cream without culture. The difference, however, is so slight, it is doubtful if it would pay to use skim milk powder culture. The yield of butter from pasteurized cream was from $\frac{3}{4}$ to 1 per cent. less than from the raw cream.

In 1914 the Dairy Division conducted an experiment in pasteurizing cream with a continuous pasteurizer and a modern cream ripener. In making this experiment, all the cream was put in the ripener and, with the agitator running, a churning of the raw cream was drawn off and put in an ordinary cream vat. The same quantity was run through

the continuous pasteurizer and cooled with a tabular cooler. The balance was pasteurized and cooled in the ripener. The experiment was repeated ten times between July 1st and 22nd. Ten per cent. culture was used in all the lots of cream. The following table shows the average of the ten churnings in each lot.

Comparison of Continuous and Holding Methods of
Pasteurizing Raw Cream. 10 Churnings of Each.

Method	Pasteurizing Temperature	Per Cent. Acid in Cream after Pasteurizing	Per Cent. Acid in Cream at Churning	Temperature Cream at Churning
Holding	140 Deg.	.194	.455	56.1 Deg.
Continuous	171 Deg.	.187	.411	53.6 Deg.
Raw Cream ....	...	.213*	.473	53.5 Deg.

Method	Time Churning	Per Cent. Fat in Buttermilk	Per Cent. Moisture in Butter	Average Score for Flavor	
	Min.			July 22	Nov. 1 ^o
Holding	39.0	.203	13.35	43.17	39.15
Continuous	39.5	.201	13.85	43.17	39.15
Raw Cream	42.4	.170	13.76	42.90	37.40

*Tested same time as pasteurized cream.

NOTES ON THE FLAVOR OF THE BUTTER.

On July 22nd there was practically no difference in the commercial value of the three lots of butter. On November 18th the raw cream butter was off in flavor to a much greater extent than the other two lots. Both lots of butter made on July 10th from the pasteurized cream were fishy on November 19th. The butter from the raw cream made on the same date was not fishy. The highest score on the butter from raw cream when fresh was 43.75. On November 19th this lot was fishy and scored only 37 points. We were not able to discover what caused the fishy flavor in either case. There is no doubt that the pasteurization of cream improves the keeping quality of butter.

Cost of Fuel and Ice in Pasteurizing Cream, Holding and Continuous
Methods. Creamery operated 5 days on each.

Method	Cost of ice per 1,000 lbs. Butter	Cost of fuel per 1,000 lbs. Butter	Tot. Cost fuel & ice per 1,000 lbs. Butter	Average time Creamery in operation each day
	cts.	\$	\$	
Holding .....	.22	1.64	1.86	5 hrs. 13 min.
Continuous .....	.02	1.53	1.55	4 hrs. 57 min.

RESOLUTIONS ADOPTED BY THE PROVINCIAL DAIRY CONVENTION.

RESOLVED: "That we extend our hearty vote of thanks to the Board of Trade and also to the Public Library of the City of Calgary for their generosity in extending to us the use of their comfortable rooms and utilities."

RESOLVED: "That we extend a hearty vote of thanks to Mr. Geo. H. Barr, Chief of the Dairy Division, Ottawa, for coming to our Convention and for the many helpful suggestions he has given us in connection with our business."

RESOLVED: "That we extend our hearty vote of thanks to the different members of the wholesale trade represented for their helpful criticism and discussion on questions bearing in our particular line."

RESOLVED: "That whereas we fully appreciate the services of the Department of Agriculture in the past we suggest that in order to maintain an even and high standard for our products on the World market the

Department be asked to place two butter graders at Calgary and two at Edmonton and further that the graders be changed vice versa at least once a month."

RESOLVED: "That the Convention recommend the adoption of a standard butter box of 12 $\frac{1}{4}$ "x12 $\frac{1}{4}$ "x11 $\frac{1}{2}$ " inside measurements, that the box be made of clear spruce lumber, kiln dried, planed on all sides and edges, smoothly paraffined on the inside surface and with detachable cover with four stout hooked nail fasteners."

RESOLVED: "That we recommend the adoption of pasteurization of cream for buttermaking in creameries throughout the Province."

RESOLVED: "That we extend our hearty vote of thanks to the Department of Agriculture for the excellent services rendered to the dairymen of this Province during the past year."

Committee on Resolutions:

D. Morkeberg, Markerville, Chairman.

P. Pallesen, Calgary.

G. B. Thompson, Edmonton.

G. E. Cahoon, Cardston.

H. McIntosh, Cardston, Secretary.

A MESSAGE TO CREAMERY OPERATORS

BY C. P. MARKER,

Dairy Commissioner.

The production of creamery butter in the Province has increased about 35% annually during the past three years (34.9% in 1913, 32.4% in 1914 and 35.8% in 1915), and there is a reasonable prospect of a like increase in the immediate future. We have reached the point where we must look to the outside markets, both East and West, for an outlet of at least a portion of our surplus production in Summer. This means more and keener competition as we go along.

The large buyers of Alberta Creamery Butter both East and West have, during the past season especially, expressed dissatisfaction with many of the butter packages on account of their form and general make-up. The form and class of box wanted is described in Resolution No. 5 and the creamery operators are advised to specify just that kind of a package when they place their orders with the box manufacturers, unless the merchants to whom they sell their butter specially call for any other given form.

The adoption of proper pasteurization of cream for butter making (as recommended in Resolution No. 6), will go a long way to meet another serious criticism of our creamery butter, namely, that its keeping quality is not equal to that of the best butter made in other countries. It must be remembered that an annually increasing proportion of the Summer season's make of butter will not be required for the immediate wants of the consuming public but must be held in storage by somebody until the season of short production and then placed upon the market, often in competition with newly made butter.

Naturally, the produce merchants who thus buy and store butter for future market will give preference in the matter of price to the product which has good keeping qualities—which is safe to hold.

The great majority of the creamery butter manufacturers of Alberta have served the dairy industry well during the past few years in striving for a better quality of cream by paying for it on a quality (grade) basis. While, as a result, there has been a marked improvement in the quality of the creamery butter there is room for further betterment, especially in the matter of keeping quality. Pasteurization of the cream will mean another long step in that direction.

The cost of installing and operating a pasteurizing equipment in a creamery will, it is true, add slightly to the expense of making butter but the question which is now facing the creamery operator of Alberta is not whether it will pay him to pasteurize. The question is can he afford to get along without it.

At this stage of our dairy development we cannot afford to leave undone anything that will help to secure for our surplus butter production a better satisfied and more remunerative market.

It has been amply demonstrated that the proper pasteurization of cream will improve the keeping quality of the butter made from it, but there is another and no less important phase of this question, namely, that pasteurization also destroys any disease germs that may be present in the cream when it is received at the creameries. Hence, butter made from pasteurized cream is a safe commodity to use.

We pointed out at the Convention that there will be a slight, upward revision of the butter grade standards of the Province before next season opens. The pasteurization of cream will likely be made one of the requirements for "Special" Grade Certificates. Also the flavor of the butter must be mild. Mild flavored butter can be made only from mild flavored, comparatively sweet cream.

A "sweet cream" campaign can be most effectively carried on during the months of January and February when the majority of the farmers can secure and store, at small expense, a supply of ice for cooling their cream during the warm summer months that are to follow. Each creamery operator can do a great deal to bring that matter before his patrons, especially in connection with his policy of buying cream on grade.

The Department will, of course, take a hand in the campaign as well.

In conclusion, let me personally, and on behalf of my co-workers in the Dairy Branch, wish you a Happy and Prosperous New Year. Let me assure you that the Provincial Dairying Service is ever ready to co-operate with any person and any agency who is helping to advance the dairy interests of the Province along stable and permanent lines.

Respectfully submitted,

C. P. MARKER,
Dairy Commissioner.

REPORT OF THE SUPERINTENDENT OF FAIRS AND INSTITUTES

SIR.—I beg to submit herewith a report of the Superintendent of Fairs and Institutes for the year 1915.

The writer feels somewhat at a disadvantage in having only joined the Department last August but the report covers substantially all that transpired during the year.

I.—FAIRS AND EXHIBITIONS

The attendance and the interest manifested at Calgary and Edmonton Exhibitions as well as at the District fairs of the Province, were probably greater than in any previous year. Despite the rainy weather which prevailed throughout the greater part of July and August both the above Exhibitions were fortunate in having fine weather, while the majority of the District fairs, most of which were held later in the season, also escaped the heavy rains, which, it will be remembered, were abnormally frequent. The quality of the stock exhibited was fully up to the usual standard, but at some of the District fairs competition was not as keen as it should have been. The lateness of the season in some sections, and the magnificent crops which were harvested throughout Alberta, naturally prevented a good many farmers from taking part as usual in the exhibition of their live stock and farm products at the District fairs. Some changes in the dates of the fairs for 1916 it is hoped will be beneficial with respect to competition and attendance.

Quite a few of the District fairs have not been exhibiting the progress and life that they ought. Something should be done to stimulate a deeper interest, a keener rivalry, and more active co-operation at these fairs, so that they may prove more helpful and beneficial to the various districts.

The real mission of Fairs being the improvement of live stock and other farm products, through the rivalry engendered by competition, it becomes absolutely necessary to have active competition from year to year to prevent retrogression. In all countries where competitive fairs are regularly held, the improvement in live stock has been most marked, and very naturally the breeds and classes where competition has been the keenest, the improvement and interest has been greatest. The Secretaries of the various Agricultural Societies should see that their several classifications be made as complete and attractive as possible and especially suited to the requirements and conditions of their respective districts. Special prizes for animals or articles that are of particular interest to the people in certain districts are always attractive and are usually productive of increased competition and consequently of additional benefit to the community.

OFFICIAL JUDGES

The practice in recent years of having Government appointed judges at all fairs has proved extremely successful and satisfactory. No less than 96 per cent. of the Exhibition Managers and Agricultural Fair Secretaries reported complete satisfaction with the awards made by the various judges during the past year. This is a remarkable showing when one considers the variety of opinions held by farmers in general and the tendency of the average disappointed exhibitor to criticise or complain.

The writer would suggest that in future wherever it is found practicable for judges to explain to the people immediately after each

class their reasons for the decisions given by them this should be done. It is a common occurrence for exhibitors and spectators alike to be surprised, and sometimes even staggered, at the awards made by the most experienced, competent, and disinterested judges; and when no opportunity is offered for those judges to explain their apparently erroneous decisions the people are usually left entirely in the dark as to why such awards were made. The writer has sometimes found it necessary when judging some classes of stock, to explain why certain animals were placed higher in the list than others that because of their symmetry or style perhaps, appeared to those outside the ring to be superior. As a general rule the judging is correctly done, but it is hard to convince a disinterested spectator, and still harder a disappointed exhibitor, that no injustice has been done, unless the judges have an opportunity to explain their actions after each class. This is why I am in favor of a verbal explanation being made wherever practicable.

Another subject worthy of consideration is the condition in which animals are brought into the show ring. It is the manifest duty of every exhibitor to show his stock in the best possible condition, and consequently make them appear to the best advantage in the eyes of the judge. Many really meritorious animals are frequently and justly relegated to a much lower position in the prize list than they would occupy if exhibited in proper condition. This is a matter demanding the serious attention of live stock exhibitors in general.

FAIRS AND INSTITUTES.

The following is a list of Fairs held in the Province during the year 1915 together with the dates.

LIST OF FAIRS

Alix	September 28th	High River	July 15, 16th
Bowden	October 1st	Holden	September 15th
Cardston	August 24, 25th	Hays	September 15th
Claresholm	August 12, 13th	Innisfail	September 17, 18th
Chauvin	August 10th	Irvine	September 21st
Coronation	September 23, 24th	Innisfree	October 5, 6th
Camrose	August 19, 20th	Irma	September 17th
Crossfield	June 23, 24th	Kitscoty	September 24th
Cochrane	September 7, 8th	Lacombe	August 24, 25, 26th
Consort	September 29, 30th	Leduc	September 14th
Carmangay	August 17, 18th	Lloydminster	September 21st, 22nd
Chinook	August 13th	Langdon and Bow River	August 6th
Carbon	July 22nd	Lesser Slave Lake, September 1st, 2nd	
Castor	October 6, 7th	Lake Saskatoon & Beaver Lodge	
Didsbury	August 12, 13th		September 24, 25th
Daysland	August 3, 4th	Mannville	October 1st
Deseret (Magrath)	August 27, 28th	Mid-Pembina	September 16th
Donalda	October 6, 7th	Milnerton	September 28th
Entwistle	September 14th	Nakamun	September 10th
Elk Point	September 17th	North Alberta	September 3rd
Edgerton	September 23rd	Nateby	September 24th
Edson	September 8th	Olds	October 6, 7th
Fort Saskatchewan	October 7, 8th	Okotoks	July 13, 14th
Gleichen	August 19, 20th	Onoway	September 17th
Granum	August 4, 5th	Oyen	August 11th
Grande Prairie	September 21, 22nd	Pincher Creek	September 24th
Gadsby	October 5th	Priddis & Millarville, September 30th	
Grassy Lake	October 12th	Paddle River	September 23rd
Griffin Creek	October 4, 5th	Ponoka	September 21st, 22nd
Highland	September 24, 25th	Provost	August 6th
Hanna	September 22, 23rd	Peace River Crossing	October 7, 8th

Red Deer .....August 17, 18, 19, 20th	Tofield September 14th
Rocky Mountain House	Trochu August 31, Sept. 1st
September 20th, 21st	Vegreville August 17, 18th
Raymond ...August 31, Sept. 1st, 2nd	Vulcan October 21st, 22nd
St. Albert .....September 15, 16th	Vermilion September 28, 29th
Stavely .....August 6th	Viking & Birch Lake, September 16th
Strome-Killam .....September 2nd.	Wilhelmina September 3rd
Swalwell July 20th, 21st	Waterhole September 17, 18th
Spirit River .....September 20th	Westlock September 21st
Stony Plain .....August 17th	Wetaskiwin August 27, 28th
Stettler September 9, 10th	Warner September 16, 17th
Sedgewick August 5th	Wainwright September 9, 10th
St. Paul September 14, 15th	Winnifred October 13, 14th
Taber September 22nd, 23rd	Youngstown ... September 20th, 21st
Three Hills September 22nd	

EXHIBITION ASSOCIATIONS

Athabasca September 21st, 22nd	Edmonton, August 9, 10, 11, 12, 13, 14
Calgary, June 30, July 1, 2, 3, 4, 5, 6,	and 7th.

STALLION SHOWS

The following Exhibition Associations held Stallion Shows to which the Department sent official judges:

Calgary Exhibition Association	Edmonton Exhibition Association
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POULTRY SHOWS

Poultry Shows were held by the following Societies and Associations:

Deseret (Magrath) Agricul. Society	Pincher Creek Poultry Association
Okotoks Agricultural Society	Lethbridge Poultry Association
Provost Agricultural Society	Medicine Hat Poultry Association
Irma Agricultural Society	Calgary Poultry Association
Winnifred Agricultural Society	Edmonton Poultry Association
Cochrane Agricultural Society	

HORTICULTURAL SHOWS

The following Societies held exhibitions in 1915:

Magrath	Red Deer
Taber	Calgary
St. Albert	Edmonton

AGRICULTURAL SOCIETIES AND SECRETARIES FOR THE YEAR 1915.

SOCIETY	SECRETARY	ADDRESS
Airdrie	J. M. Windsor	Airdrie
Alix	G. H. Darlow	Alix
Acme	W. Bannerman	Acme
Bowden	T. B. Riley	Bowden
Big Bend	W. A. Holmes	Loverna
Bassano	I. P. Sharp	Bassano
Bashaw	J. A. Marshall	Bashaw
Berry Creek	L. E. Helmer	Natebv
Cardston	Wm. Duce	Cardston
Claresholm	J. R. Watt	Claresholm
Chauvin	H. Foreman	Chauvin
Coronation	W. D. Guthrie	Coronation
Camrose	G. Stevenson	Camrose
Crossfield	Charles McKay	Crossfield
Cochrane	J. Cook	Cochrane
Consort	H. A. Murphy	Consort
Carmangay	A. F. Wilson	Carmangay
Chinook	Lorne Proudfoot	Chinook

SOCIETY	SECRETARY	ADDRESS
Carbon	T. A. Walker	Carbon
Castor	Hugh McLachlan	Castor
Didsbury	Parker Reed	Didsbury
Daysland	A. A. P. McDowell	Daysland
Deseret	Benj. Matkin	Magrath
Donalda	B. A. Butzer	Donalda
Entwistle	J. Read	Entwistle
Elk Point	Chas. Hood	Elk Point
Edgerton	S. J. Wigley	Edgerton
Edson	F. U. Laycock	Edson
Empress	John Cusack	Empress
Fort Saskatchewan	G. T. Montgomery	Ft. Saskatchewan
Flaxland	N. E. Lee	Flaxland
Gleichen	Peter MacLean	Gleichen
Granum	James Blair	Granum
Grande Prairie	David H. Axon	Grande Prairie
Gadsby	C. P. Garvey	Gadsby
Gopher Head	Frank Powell	Gopher Head
Grassy Lake	H. J. Scott	Grassy Lake
Highland	W. J. Bryan	Delia
Hanna	W. Thomas	Hanna
High River	Harry Nelson	High River
Holden	Norman L. Campbell	Holden
Hardisty	Alex. Mursell	Hardisty
Hays	James Raw	Lousana
Innisfail	Stewart Moore	Innisfail
Irvine	F. J. Crewe	Irvine
Innisfree	L. M. Trace	Innisfree
Irma	F. W. Watkinson	Irma
Kitscoty	G. W. Parsons	Kitscoty
Lacombe	N. E. Carruthers	Lacombe
Leduc	A. R. Ennis	Leduc
Lloydminster	H. Huxley	Lloydminster
Langdon & Bow River	Walter Allcock	Langdon
Lesser Slave Lake	George E. Martin	High Prairie
Legal	Arthur Carriere	Diligence
Macleod	W. C. Bryan	Macleod
Medicine Hat	C. Prince	Medicine Hat
Mannville	Ivan L. Smith	Mannville
Mid-Pembina	Charles Welch	Dunstable
Munson	W. F. White	Munson
Milnerton	E. W. Meers	Wimborne
Manyberries	John F. Flynn	Manyberries
Nanton	William Robertson	Nanton
Nakamun	J. A. Hinchliffe	Nakamun
North Alberta	N. O. Jack	Colinton
Olds	R. B. Campbell	Olds
Okotoks	E. A. Hayes	Okotoks
Onoway	A. Priestly	Onoway
Oyen	J. H. Alexander	Oyen
Pincher Creek	J. W. Harwood	Pincher Creek
Priddis & Millarville	Joseph Standish	R.R. No. 1. Calgary
Paddle River	D. B. O'Brien	Paddle River
Ponoka	T. W. Hutchinson	Ponoka
Provost	Kenneth Watson	Provost
Peace River	E. A. Bell	Griffin Creek
Red Deer	Jas. Mann	Red Deer
Rumsey	J. H. Hutcheson	Rumsey
Rocky Mountain House	Geo. T. Thompson	Rocky Mountain House
Raymond	O. F. Urnsenbach	Raymond
Fallis and Rexboro	A. G. Bennett	Rexboro
St. Albert	J. I. Tellier	Morinville
Stavely	R. A. Hopkins	Stavely
Strome-Killam	Herman Coles	Killam
Rawdonville (Swalwell)	F. B. White	Swalwell
Stony Plain	William Robertson	Stony Plain

SOCIETY	SECRETARY	ADDRESS
Saskatoon Lake and Beaver Lodge	A. M. Smith	Lake Saskatoon
Stettler	Geo. T. Day	Stettler
Strathmore	C. G. Lewis	Strathmore
Spirit River	R. C. Watson	Spirit River
Sedgewick	E. D. LeRiche	Sedgewick
St. Paul	Ed. Rousseau	St. Paul
Stanmore	W. G. Imman	Stanmore
Taber	T. A. Sundal	Taber
Three Hills	C. P. McDonough	Three Hills
Tofield	Joseph Rogers	Tofield
Trochu	R. H. Slipp	Trochu
Vegreville	H. L. Cunningham	Vegreville
Vulcan	R. W. Glover	Vulcan
Vermilion	Job Mace	Vermilion
Viking and Birch Lake	Jas. C. Barker	Viking
Wheatsheaf	M. Webber	Wilhelmina
Waterhole	R. S. Hurst	Waterhole
Wabash Valley	A. R. Brown	Westlock
Wabamun	L. C. Johnson	Wabamun
Wetaskiwin	C. D. Enman	Wetaskiwin
Warner	A. P. Veale	Warner
Wainwright	David Hanson	Wainwright
Winnifred	John Christopherson	Winnifred
Youngstown	Ernest A. Rason	Youngstown

EXHIBITION ASSOCIATIONS

Calgary	E. L. Richardson	Calgary
Lethbridge	I. W. McNicol	Lethbridge
Athabasca	J. E. Lucas	Athabasca
Edmonton	V. J. Stark	Edmonton

OFFICIAL JUDGES

The following are the names and addresses of judges who made the awards at the fairs held in the Province during the year 1915, together with the names of the fairs and of the classes judged.

Names and Addresses of Judges	Classes Judged	List of Fairs
Nell Smith, Brampton, Ontario	Horses	Alix, Coronation, Camrose, Consort, Didsbury, Holden, Irma, Lacombe, Ponoka, Tofield, Vegreville, Viking, Wetaskiwin, Wainwright.
A. M. Campbell, Erskine, Alberta	Cattle, Sheep and Swine	Alix, Coronation, Consort, Castor, Gadsby, Ponoka.
J. W. Durno, Calgary, Alberta	Horses	Bowden, Crossfield, Cochrane, Gleichen, Highland, Hanna, High River, Langdon, Okotoks, Priddis, Swallow, Trochu, Berry Creek.
W. J. Carlyle, Calgary, Alberta	Cattle, Sheep and Swine	Bowden, Cardston, Cochrane, Claresholm, Granum, Hanna, Highland, Berry Creek, Priddis, Staveland, Trochu, Youngstown.
A. Colquhoun, Nanton,	Horses	Cardston, Claresholm, Carman-gay, Magrath, Granum, Grassy Lake, Olds, Pincher Creek, Raymond, Staveland, Taber, Vulcan, Warner, Winnifred.

Names and Addresses of Judges	Classes Judged	List of Fairs
W. R. Lowes, Edmonton Horses		Chauvin, Castor, Daysland, Donalds, Gadsby, Leduc, Nakamun, Onoway, Provost, Rocky Mountain House, St. Albert, Strome-Killam, Stony Plain, Sedgewick.
A. E. Meyer, Edmonton Cattle, Sheep and Swine		Chauvin, Camrose, Daysland, Fort Saskatchewan, High River, Holden, Innisfree, Irma, Lacombe, Mannville, Collinton, Okotoks, Provost, Swallow, Sedgewick, Tofield, Vegreville, Vermilion, Viking, Wetaskiwin, Wainwright, Oyen, Chinook.
Wm. Giles, Munson Horses		
W. J. Stephen, Claresholm Cattle, Sheep and Swine		Carmangay, Magrath, Irvine, Red Deer, Raymond, Vulcan, Crossfield.
W. J. Elliott, Olds Horses		Oyen, Chinook, Irvine, Taber
H. W. Scott, Claresholm Cattle, Sheep and Swine		Pincher Creek, Grassy Lake, Winnifred, Vulcan.
J. G. Taggart, Vermilion Sheep		Vermilion.
F. S. Grisdale, Vermilion Cattle, Sheep and Swine		Stony Plain.
James Clements, Edmonton Horses		Vermilion, Mannville, Innisfree, Fort Saskatchewan, Red Deer, Cochrane.
James Clements, Edmonton Cattle, Sheep and Swine		Entwistle, Dunstale, Westlock, Paddle River, Stony Plain, Didsbury.
A. J. Murphy, Cochrane Horses		Elk Point, Kitscoty, Lloydminster, St. Paul.
D. C. Cavin, Carbon Cattle, Sheep and Swine		St. Paul, Elk Point, Lloydminster, Kitscoty.
Alex. McKercher, Olds Horses		Didsbury, Lousana, Innisfail, Milnerton, Strome - Killam.
Geo. Hutton, Sr., Lacombe Cattle, Sheep and Swine		Stettler, Three Hills.
J. B. Alcock, Edmonton Horses		Stettler, Lousana, Innisfail, Three Hills, Milnerton.
L. A. Lowes, Calgary Cattle, Sheep and Swine		Entwistle, Dunstale, Westlock, Paddle River.
W. R. Winslow, Lacombe Cattle, Sheep and Swine		Langdon, Gleichen, Munson, Strome-Killam, Nakamun, Leduc, St. Albert, Onoway, Rocky Mountain House, Olds.
Dr. McKercher, Peace River Crossing Horses		Lesser Slave Lake, Griffin Creek, Peace River Crossing, Waterhole, Spirit River, Grande Prairie, Lake Saskatchewan.
John McNally, Olds Cattle, Sheep and Swine		Lesser Slave Lake, Griffin Creek, Peace River Crossing, Waterhole, Spirit River, Grande Prairie, Lake Saskatchewan.
H. S. Pearson, Red Deer Dairy Products		Vermilion.

EXHIBITIONS

Edmonton

Robert Graham, Toronto, Ontario	Harness Classes
Wm. Grant, Regina, Saskatchewan	Draft Horses
J. M. Fletcher, Elgin, Illinois	Percherons
W. F. Stevens, Huntingdon, Quebec	Dairy Cattle
J. McCaig, Edmonton	Sheep
Joseph Shackleton, Edmonton	Poultry
C. Marker, Calgary	Dairy Products
W. J. Elliott, Olds	Swine
J. M. Gardhouse, Weston, Ontario	Clydesdales
W. R. W. Parsons, Regina	Ponies
Peter White, Pembroke, Ontario	Beef Cattle
Captain T. E. Robson, London, Ont.	Shorthorns
W. H. Reid, Kingston, Ontario	Poultry

Calgary

J. M. Fletcher, Elgin, Illinois	Percherons, Belgians, Suffolks
W. R. Lowes, Edmonton	Harness Classes
George Pepper, Toronto, Ontario	Saddle Horses
G. H. Hutton, Lacombe, Alberta	Dairy Cattle
H. S. Pearson, Red Deer, Alta.	Dairy Products
Alex. Galbraith, Edmonton, Alta.	Clydesdales and Shires
Duncan Anderson, Orillia, Ontario	Beef Cattle
W. F. Stevens, Edmonton	Sheep and Swine

Athabasca

S. Carlyle, Edmonton	Horses
Geo. Brown, Sedgewick	Cattle, Sheep and Swine

Following is a list of societies organized in 1915:

Oyen, Donalda, Flaxland, Athabasca.

EDUCATIONAL WORK.

Short Course Schools of six days each were held as follows:

Blackie, Strathmore, Wetaskiwin, Tofield, Westlock, Claresholm, Olds, Vermilion. The attendance at nearly all the places was extremely gratifying and much intelligent interest was shown by the questions asked of the various speakers who were as follows:

Honourable Duncan Marshall, Minister of Agriculture, Edmonton Alberta.
George Harcourt, B.S.A., Deputy Minister of Agriculture, Edmonton, Alta.
H. A. Craig, B.S.A., Superintendent of Demonstration Farms, Edmonton, Alberta.

James Clements, Assistant Superintendent of Fairs and Institutes, Edmonton, Alberta.

J. D. Smith, Superintendent of the Seed and Weed Branch, Edmonton, Alberta.

Sidney Carlyle, Assistant Superintendent of Demonstration Farms, Edmonton, Alberta.

E. A. Howes, Principal School of Agriculture, Vermilion, Alberta.

W. J. Stephen, Principal School of Agriculture, Claresholm, Alberta.

W. J. Elliott, Principal School of Agriculture, Olds, Alberta.

J. McCaig, M.A., LL.B.

C. P. Marker, Dairy Commissioner, Calgary, Alberta.

A. W. Foley, Poultry Superintendent, Edmonton, Alberta.

W. F. Stevens, Live Stock Commissioner, Edmonton, Alberta.

H. B. Smith, Manager C.P.R. Demonstration Farm, Strathmore, Alberta.

George Hutton, Sr., Lacombe, Alberta.

William Dryden, Brooklin, Ontario.

A. W. McIntyre, Newington, Ontario.

E. H. Malcolm, Killam, Alberta.

F. S. Grisdale, Instructor School of Agriculture, Vermilion, Alberta.

J. G. Taggart, Instructor School of Agriculture, Vermilion, Alberta.

J. C. Hooper, Instructor School of Agriculture, Claresholm, Alberta.

The lectures on live stock dealt with the history of the various breeds, their type and characteristics, breeding, feeding, care, management, and marketing. All the instruction given was thoroughly practical. The animals were representative of their respective breeds and served as object lessons in illustrating the various subjects. Farmers asked for more and more information with a persistence that would have done credit to "Oliver Twist" as portrayed by Dickens.

The judging classes proved intensely interesting. Nothing pleases an agricultural gathering more than the close examination of the animals, especially the horses and cattle, and the placing of them as would be done in a regular fair or show ring. More real helpful instruction can be given to the average farmer in this manner than in any other.

ACKNOWLEDGMENTS.

The Department wishes to express its thanks to the following list of local breeders who loaned their stock for instruction purposes:

STOCK	OWNER	ADDRESS
2 Hereford Cows	Frank Collicutt	Calgary
1 Hereford Bull	Frank Collicutt	Calgary
1 Steer	Frank Collicutt	Calgary
1 Percheron Stallion	E. A. Davenport	Acme
3 Percheron Fillies	E. A. Davenport	Acme
2 Percheron Stallions	W. B. Thorne	Aldersyde
1 Holstein Bull	Thomas Laycock	Okotoks
1 Holstein Cow	Thomas Laycock	Okotoks
2 Clydesdale Stallions	A. L. Dollar	High River
2 Clydesdale Mares	David Thorburn	DeWinton
1 Shorthorn Bull	Charles Lyall	Strome
2 Shorthorn Cows	Charles Lyall	Strome
2 Shorthorn Cows	Dr. P. Talbot	Lacombe
1 Shorthorn Bull	Honorable Duncan Marshall	Olds
2 Holstein Cows	Demonstration Farm	Stony Plain
1 Ayrshire Bull	Demonstration Farm	Claresholm
3 Ayrshire Cows	Demonstration Farm	Claresholm
3 Shorthorn Cows	Demonstration Farm	Sedgewick
2 Oxford Ewes	Demonstration Farm	Sedgewick
1 Oxford Ram	Demonstration Farm	Sedgewick
2 Shropshire Ewes	Demonstration Farm	Sedgewick

The Department is indebted to the various railway companies for the furnishing of cars and also for giving free transportation for the lecture staff of the schools and for the live stock. The courtesy and ready co-operation of officials helped very materially to establish the success of the schools.



PRIZE WINNING FARM DRAFT TEAM

INSTITUTE MEETINGS

The number of Farmers' Institute meetings held during last year was not so great as formerly for the reason that this class of meeting is not nearly as popular as it used to be. The people prefer visiting the Short Course Schools or the Mixed Farming Special Train, because there they can hear speakers from the Department on practically all subjects, and also see and compare high-class animals of the different breeds. It is always more interesting and profitable for a speaker to talk and to illustrate his subject with an animal alongside than it is to describe an animal that is not present. Another reason why institutes are less favored than formerly is probably because of the difficulty in getting good outside speakers. The views of an outsider, whether Government appointed or not, frequently act as a stimulant to the local society, and are therefore productive of increased interest and benefit. It must be said, however, that the Institutes have been the forerunners of the more systematized work now being established. They will no doubt continue to serve a useful purpose in outlying districts.

The following is a list of places where Institute meetings were held:

Gleichen	Oyen	Huxley
Bassano	Big Bend	Camrose
Irricana	Sibbald	Bashaw
Standard	Clemens	Alix
Carseland	Hanna	Lousana
Richdale	Craigmyle	Granum
Chinook	Delia	High River
Cereal	Victor	Coronation
Collholme	Morrin	Waterglen
Rainbow	Munson	Monitor
Youngstown	Rumsey	Gadsby
Sod Hall	Trochu	

MIXED FARMING SPECIAL TRAIN

This train was composed of twelve cars and was probably the most complete and best equipped of any train ever sent out for such a purpose, and it elicited the most complimentary comments from visiting officials of other provinces. It carried draft horses, beef cattle, dairy cattle and dual purpose cattle; a car of dairy appliances, one of model houses for swine, one of poultry houses and appointments, one of veterinary appliances, one of seeds, weeds, grains and grasses. Another contained the work of the students of the three Agricultural Schools, in blacksmith and carpenter work, and a car contained specimens of the stuffed wild game of Alberta; two cars illustrated the Domestic Science work of the Schools. The various cars were in charge of the representatives from the Department, all of whom answered questions and explained the use and purpose of the respective parts of the exhibit. Lectures on horses and cattle were given at each place by Alex. Galbraith, Duncan Anderson, J. G. Taggart and others. The animals were taken from the cars at each place and their respective merits, faults, and characteristics pointed out, and freely discussed. Stock raising and mixed farming were everywhere recommended by the various speakers as being essential to any good permanent system of agriculture.

Following is a list of the points visited by the Mixed Farming Special in 1915:

ALDERSYDE BRANCH, C. P. R.

Brant	Carmangay
Vulcan	Barons
Champion	Nobleford

FOREMOST AND COUTTS BRANCH, C. P. R.

Conrad	New Dayton
Skiff	Milk River
Foremost	Coutts

LANGDON AND BASSANO BRANCH, C. P. R.

Carseland	Nightingale
Bassano	Irricana
Standard	Acme

GRAND TRUNK PACIFIC, CALGARY-EDMONTON.

Camrose	Lousana
New Norway	Elnora
Bashaw	Huxley
Mirror	Trochu
Alix	Three Hills
Delburne	Swalwell

GRAND TRUNK PACIFIC, EDMONTON WEST

Stony Plain	Entwistle
Wabamun	Edson

CANADIAN NORTHERN RAILWAY, VEGREVILLE-CALGARY LINE

Vegreville	Stettler
Riley	Rumsey
Donalda	Munson

CANADIAN NORTHERN RAILWAY, CALGARY-SASKATOON LINE

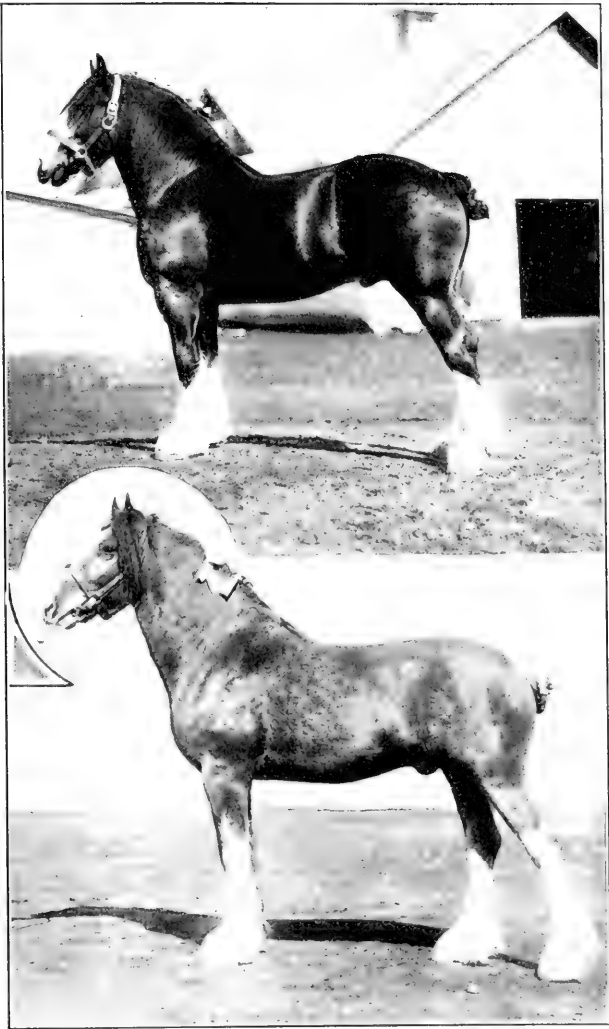
Delia	Chinook
Craigmyle	Cereal
Hanna	Oyen
Richdale	Sibbald
Youngstown	

EDMONTON, DUNVEGAN AND B. C. RAILWAY.

Reno	Sawridge
McLennan	Westlock
Falher	Busby
High Prairie	Morinville
Swan River	Edmonton

EXCURSIONS.

Successful excursions were run to the Provincial Agricultural Schools and Demonstration Farms at Claresholm, Vermilion and Olds during the summer. The patronage at all of these was good, the number of excursionists varying from 400 to 700 at the different schools. They were taken advantage of, not only by farmers and their families, but by a good many townspeople. The interest of visitors was taken up in the first place in the practical nature of the courses provided for both boys and girls and the good equipment for the work. The variety of experimental work done in the plots in fodder grains and roots was also keenly observed. The building equipment and live stock and crops of the farms were also inspected. It is proposed in the future to considerably extend and more carefully organize the excursion work by increasing the number of excursions and making the observation work more profitable by systematic explanation and instruction.



CLYDESDALES AT CALGARY SPRING SHOW, 1916.—PRIZE WINNING AGED, RESERVE CHAMPION.—PRIZE WINNING THREE YEAR OLD, CHAMPION.

FINANCIAL STATEMENT OF AGRICULTURAL SOCIETIES.

	SOCIETY	1915				Total Expenditure	Balance on Hand	Overdraft	Assets	Liabilities
		Government Grant Paid	Total Receipts	Total Expenditure	Balance on Hand					
1	Cardston	\$ 753.83	\$1,204.52	\$2,671.40	\$ 8.12	\$475.00		\$5,225.82	\$ 506.00	
2	Deseret	1,012.75	3,841.87	3,942.15		100.28		5,000.00	4,100.00	
3	Didsbury	678.17	2,159.07	2,156.59	2.48			2.48	485.00	
4	Innisfail	2,017.24	7,531.42	7,507.43	23.99			6,925.24	4,069.70	
5	Lacombe	1,760.27	8,443.90	7,562.50	881.40			14,614.99	6,485.65	
6	Red Deer	2,785.40	29,829.87	29,795.31	34.56			3,427.59	3,427.59	
7	Macleod									
8	Medicine Hat									
9	Olds	742.33	1,195.85	1,717.60	128.27			4,528.27	2,491.48	
10	Pincher Creek		3,271.39	3,218.83		47.44		1,419.76	547.44	
11	Ponoka	1,410.03	4,023.13	3,965.48	57.66			1,057.66	1,360.00	
12	Raymond	1,515.52	5,649.80	5,649.80				4,125.50	4,125.50	
13	(Closed)									
14	Okotoks	1,193.83	2,863.68	2,836.49				2,027.19	785.00	
15	Vegreville	1,505.10	4,271.69	4,129.55	142.14			1,512.90	1,512.90	
16	Wetaskiwin	2,285.00	5,928.58	5,960.83		12.55		3,221.94	2,800.00	
17	Leduc	1,953.07	6,038.27	5,733.09	305.18			2,974.28	2,513.75	
18	Nanton	645.50								
19	Vermilion	1,354.67	4,471.94	4,267.54	204.40			3,682.20	1,440.75	
20	High River	1,153.00	4,574.16	4,489.09	85.07			1,485.07	1,000.00	
21	Priddis and Millarville	650.33	1,598.59	1,587.77	10.82			14.32	600.00	
22	Viking	1,985.37	2,400.39	2,400.30	.09			895.92	601.00	
23	St. Albert									
24	Mannville	816.81	3,273.28	3,097.60	175.68			1,406.34	1,630.00	
25	Stettler	867.60	3,373.48	3,224.23	149.25			3,149.25	2,723.87	
26	Daysland	866.83	3,420.70	3,413.75	6.95			2,540.62	1,497.00	
27	Clareholm	841.00	2,984.13	2,982.65	1.48			1.48	1,053.10	
28	Minerton	995.33	2,875.28	2,771.08	104.20			1,365.90	1,100.00	
29	Irvine	473.40								
30	Taber	770.00	3,870.34	3,822.30	48.04			1,756.37	1,650.00	
31	Innisfree	1,594.93	4,896.22	4,882.69	13.53			1,893.88	2,000.00	
32	Sedgewick	940.50	1,812.80	1,809.56	3.24			3,547.50	1,871.00	

FINANCIAL STATEMENT OF AGRICULTURAL SOCIETIES.—(Continued).

	SOCIETY	Government		Total Receipts	Total Expenditure	Balance on Hand	Overdraft	Assets	Liabilities
		Grant Paid	1915						
33	Alix	\$ 380.00	\$1,227.60	\$1,937.35	.....	\$ 536.05	\$ 709.75	\$ 329.50	\$ 709.75
34	Lloydminster	2,545.57	9,630.76	9,094.71	.....	.....	.....	552.05	3,700.00
35	Camrose	2,248.50	9,174.55	9,121.03	.....	53.52	.....	53.52	2,400.00
36	Gleichen	759.33	3,641.07	3,499.11	.....	191.96	.....	8,471.96	3,281.85
37	Three Hills	866.33	2,134.88	2,134.25	.....	63	.....	705.63	780.50
38	Irma	850.67	1,915.59	1,905.45	.....	10.14	.....	1,014.14	997.00
39	Crossfield	1,215.78	3,750.56	3,693.33	.....	57.23	.....	4,057.23	2,900.00
40	Airdrie .....	.....	.....	.....	.....	.....	.....	.....	.....
41	Bowden	657.63	1,583.53	1,597.21	.....	.....	13.68	.....	657.68
42	(Closed) .....	.....	.....	.....	.....	.....	.....	.....	.....
43	Wabamun .....	.....	.....	.....	.....	.....	.....	.....	.....
44	Pallis and Rexboro .....	.....	.....	.....	.....	.....	.....	.....	.....
45	Holten	752.00	1,804.32	1,731.99	.....	72.33	.....	255.33	585.00
46	Cochrane	936.83	2,716.93	2,906.77	.....	.....	189.84	1,569.56	1,479.34
47	Stavely	837.33	3,197.02	3,163.20	.....	33.82	.....	4,067.15	1,246.00
48	Tofield	821.33	2,053.29	1,980.09	.....	73.20	.....	2,080.60	2,171.60
49	Strome-Killam	820.50	.....	.....	.....	.....	.....	.....	.....
50	Trochu	476.67	1,838.12	1,843.47	.....	.....	5.35	710.66	580.35
51	Fort Saskatchewan	669.50	2,691.16	2,553.60	.....	137.56	.....	684.71	.....
52	Granum	1,724.40	3,326.60	3,225.64	.....	96	.....	150.96	300.00
53	Langdon	658.00	2,016.12	2,004.77	.....	11.35	.....	1,044.35	750.00
54	Grande Prairie	1,036.33	3,324.23	3,325.38	.....	1.15	.....	3,974.90	1,001.15
55	Castor	547.17	855.88	1,124.04	.....	.....	1,124.04	.....	268.16
56	Kitscoy	834.17	2,321.54	2,278.60	.....	62.94	.....	922.94	400.00
57	Stony Plain	1,241.25	6,021.40	6,908.80	.....	12.60	.....	1,969.60	2,373.50
58	High Prairie	585.17	1,083.18	664.66	.....	418.52	.....	803.20	.....
59	Rawdonville	544.00	1,994.37	2,102.07	.....	.....	177.70	3,163.16	972.70
60	Entwistle	739.83	1,856.20	1,823.93	.....	32.27	.....	739.77	730.19
61	Carmanagay	951.33	2,328.38	2,294.21	.....	34.17	.....	1,453.33	700.00
62	Provost	708.87	2,497.02	2,489.79	.....	7.23	.....	1,413.63	1,999.30
63	Strathmore .....	.....	.....	.....	.....	.....	.....	.....	.....
64	Mid-Pembina	312.50	1,419.50	1,405.05	.....	14.45	.....	458.37	281.60

FINANCIAL STATEMENT OF AGRICULTURAL SOCIETIES. (Continued).

SOCIETY	Government Grant Paid 1915	Total Receipts	Total Expenditure	Balance on Hand	Overdraft	Assets	Liabilities
65 Hardisty	\$ 471.00	\$1,350.88	\$1,280.96	\$ 69.92	.....	\$ 769.92	\$ 600.00
66 Paddle River .....	.....	.....	.....	.....	.....	.....	.....
67 Acme	895.60	1,940.20	2,012.60	.....	\$ 72.40	513.67	547.40
68 Warner	256.00	696.58	678.61	17.97	.....	64.32	333.35
69 Elk Point	858.67	3,358.40	3,343.75	14.65	.....	1,514.65	1,559.50
70 Wainwright	843.00	2,742.71	2,674.71	68.00	.....	1,303.53	1,026.60
71 North Alberta	805.84	1,684.20	1,386.15	298.05	.....	1,545.65	27.80
72 Edgerton	478.17	592.44	482.55	109.89	.....	209.89	36.00
73 Munson	71.00	285.28	242.03	43.25	.....	242.03	.....
74 Legal	724.67	2,228.41	2,273.82	54.59	.....	1,514.39	865.75
75 Chauvin	493.33	.....	.....	.....	.....	.....	.....
76 Lake Saskatchewan	522.33	1,316.03	1,279.82	36.21	.....	1,106.21	883.25
77 Onoway	279.00	887.54	877.40	10.14	.....	32.64	355.75
78 Nakamun and district .....	.....	.....	.....	.....	.....	.....	.....
79 Bassano	854.67	2,709.87	2,454.93	254.94	.....	1,464.94	1,684.57
80 Hays	623.00	3,385.63	4,386.33	.....	50	4,393.00	4,370.00
81 Coronation .....	.....	.....	.....	.....	.....	.....	.....
82 Griffin Creek .....	.....	.....	.....	.....	.....	.....	.....
83 Carbon .....	.....	.....	.....	.....	.....	.....	.....
84 Gopher Head .....	.....	.....	.....	.....	.....	.....	.....
85 Winifred	471.33	817.28	1,182.59	.....	365.31	482.00	817.62
86 Gadsby	443.83	1,159.28	1,129.05	30.23	.....	81.23	10.00
87 Edson .....	.....	.....	.....	.....	.....	.....	.....
88 Spirit River	644.83	1,617.01	1,543.14	73.87	.....	703.20	250.00
89 Chinook	340.33	1,193.16	1,188.33	4.83	.....	110.28	114.50
90 Youngstown .....	.....	.....	.....	.....	.....	.....	.....
91 Consort	565.67	1,090.17	1,795.68	.....	705.51	1,702.50	1,795.31
92 Grassy Lake	122.00	.....	.....	.....	.....	.....	.....
93 Rocky Mountain House	377.17	728.67	714.17	14.50	.....	22.28	240.00
94 Big Bend	205.00	.....	.....	.....	.....	.....	.....
95 Manyberries .....	.....	.....	.....	.....	.....	.....	.....
96 Westlock	403.17	1,237.69	1,153.52	84.17	.....	542.00	450.00

FINANCIAL STATEMENT OF AGRICULTURAL SOCIETIES. (Continued).

SOCIETY	Government Grant Paid 1915	Total Receipts	Total Expenditure	Balance on Hand	Overdraft	Assets	Liabilities
97 St. Paul	\$ 335.33	\$ 841.46	\$ 839.25	\$ 2.21	.....	\$ 62.21	\$ 286.15
98 Stanmore	.....	.....	.....	.....	.....	.....	.....
99 Wheatsheaf	250.17	408.02	388.18	19.84	.....	19.84	.....
100 Highland	199.67	1,010.17	976.83	33.34	.....	447.64	425.00
101 Empress	300.53	326.08	306.10	19.98	.....	230.88	174.90
102 Hanna	92.00	.....	.....	.....	.....	.....	.....
103 Rumsey	.....	.....	.....	.....	.....	.....	.....
104 Bashaw	.....	.....	.....	.....	.....	.....	.....
105 Vulcan	112.00	1,059.30	915.73	143.57	.....	3,114.23	2,663.75
106 Berry Creek	65.00	695.10	655.74	39.36	.....	536.69	225.00
107 Waterhole	.....	646.95	639.65	7.30	.....	3,457.30	267.00
108 Oyen	.....	809.30	749.27	60.07	.....	205.07	68.25
109 Donalda	.....	.....	.....	.....	.....	85.00	.....
110 Flaxland	.....	.....	.....	.....	.....	.....	.....
FINANCIAL STATEMENT OF EXHIBITION ASSOCIATIONS.							
200 Lethbridge	.....	.....	.....	.....	.....	.....	.....
202 Calgary	13,000.00	83,067.25	77,686.27	5,380.98	.....	16,542.82	1,498.95
203 Edmonton	13,000.00	91,066.85	91,390.42	.....	\$ 332.57	18,356.18	7,309.11
204 Athabasca	747.00	3,206.20	3,481.93	.....	275.73	944.77	1,720.08

EXHIBITION STATEMENT

	SOCIETY	Date of Exhibition	No. of Entries	Amount Paid		
				in Prizes at Exhibition	in Prizes for Sports	in Prizes in Field Grain Competition
1	Cardston	Aug. 24-25	354	\$ 577.25	\$ 520.00	
2	Magrath	Aug. 27-28	514	1,133.75	132.50	
3	Didbury	Aug. 12-13	691	888.25	992.25	
4	Innisdail	Sept. 16-17	1202	2,305.75		
5	Lac du Lac	Aug. 24-26	767	1,802.75	370.00	\$ 75.00
6	Red Deer	Aug. 17-18	1426	4,475.75	946.25	
7	MacLeod					
8	Medicine Hat					
9	Olds	Oct. 6-7	631	768.00	28.00	
10	Pincher Creek	Sept. 24-25	345	402.50	35.00	
11	Ponoka	Sept. 22-23	822	1,877.72	120.00	
12	Raymond	Aug. 30-31	1371	2,073.27	298.80	
13						
14	Okotoks	July 14-15	531	816.75		
15	Vegreville	Aug. 17-18	1469	1,592.75		300.00
16	Wetaskiwin	Aug. 27-28	1459	2,761.20	437.00	
17	Leduc	Sept. 14-15	1311	2,956.65	134.00	90.00
18	Nanton					
19	Vermilion	Sept. 28-29	1774	2,252.99		120.00
20	High River	July 15-16	820	1,170.10	292.00	
21	Priddis and Millarville	Sept. 30	381	729.00		
22	Viking	Sept. 16	744	1,033.25		
23	St. Albert					
24	Mannville	Oct. 1	706	1,411.50		225.00
25	Stettler	Sept. 9-10	711	1,045.25		
26	Daysland	Aug. 3-4	885	862.00	314.25	150.00
27	Charsholm	Aug. 12-13	586	698.70	385.00	
28	Milberton	Sept. 28	1258	1,150.00		
29	Irvine					
30	Taber	Sept. 22-23	778	2,105.50	79.00	150.00
31	Innisfree	Oct. 5-6	858	2,423.00		
32	Sodgewick	Aug. 5	604	1,053.00	30.00	235.00

EXHIBITION STATEMENT— (Continued).

	SOCIETY	Date of Exhibition	No. of Entries	Amount Paid in Prizes at Exhibition	Amount Paid in Prizes for Sports	Amount Paid in Prizes Field Grain Competition
33	Alix	Sept. 28	350	\$ 351.75	.....	.....
34	Lloydminster	Sept. 21-22	1371	4,588.00	.....	.....
35	Camrose	Aug. 19-20	1491	2,541.10	\$ 318.60	\$ 15.00
36	Gleichen	Aug. 19-20	385	517.25	.....	.....
37	Three Hills	Sept. 22	711	821.50	.....	150.00
38	Irma	Sept. 17	613	791.50	.....	.....
39	Crossfield	June 23-24	919	1,763.83	643.15	.....
40	Airdrie .....	.....	.....	.....	.....	.....
41	Bowden	Oct. 1	542	712.50	6.85	.....
42	(Closed) .....	.....	.....	.....	.....	.....
43	Wabamun .....	.....	.....	.....	.....	.....
44	Fallis and Rexboro .....	.....	.....	.....	.....	.....
45	Holten .....	.....	.....	.....	.....	.....
46	Cochrane	Sept. 15	532	734.50	.....	.....
47	Stavely	Sept. 7-8	749	1,313.80	55.00	.....
48	Tofield	Aug. 6	664	1,006.50	189.90	.....
49	Strome-Killam	Sept. 14	894	887.65	.....	.....
50	Trochu	Sept. 1	817	917.50	.....	.....
51	Fort Saskatchewan	Oct. 7-8	910	1,354.70	212.50	.....
52	Graham	Aug. 4-5	733	1,217.70	327.00	.....
53	Langdon	Aug. 6	654	900.00	144.75	.....
54	Grande Prairie	Sept. 21-22	636	1,382.00	159.00	.....
55	Castor	Oct. 6-7	337	561.50	135.00	.....
56	Kilscoy	Sept. 24	809	1,134.50	.....	.....
57	Stony Plain	Aug. 17	846	1,408.65	121.50	550.00
58	High Prairie	Sept. 2	320	320.25	.....	.....
59	Rawdonville	July 20-21	480	719.50	89.50	150.00
60	Entwistle	Sept. 14-15	879	824.25	54.70	.....
61	Carmanagay	Aug. 17-18	961	891.25	230.00	.....
62	Provost	Aug. 6	791	556.00	6.75	205.00
63	Strathmore .....	.....	.....	.....	.....	.....
64	Mid-Pembina	Sept. 16	445	420.25	42.25	.....

EXHIBITION STATEMENT. (Continued).

	SOCIETY	Date of Exhibition	No of Entries	Amount Paid in Prizes at Exhibition	Amount Paid	
					in Prizes for Sports	in Prizes Field Grain Competition
65	Hardisty	Sept. 23	467	\$ 610.75	.....	.....
66	Paddle River	.....	.....	.....	.....	.....
67	Acme	.....	.....	.....	.....	.....
68	Warner	Sept. 16-17	512	530.50	\$ 70.00	.....
69	Elk Point	Sept. 15	520	734.50	15.00	.....
70	Wainwright	Sept. 9-10	766	1,236.75	392.55	\$ 195.00
71	North Alberta	Sept. 3	750	1,068.00	48.35	215.00
72	Edgerton	Sept. 23	853	747.25	.....	379.00
73	Munson	.....	.....	.....	.....	.....
74	Legal	.....	.....	.....	.....	.....
75	Chauvin	Aug. 10	819	582.00	.....	.....
76	Lake Saskatchewan	Sept. 24-25	.....	.....	.....	.....
77	Onoway	Sept. 17	461	512.25	40.00	.....
78	Nakamun	Sept. 10	308	377.10	22.15	.....
79	Bassano	.....	.....	.....	.....	.....
80	Hays	Sept. 15	509	1,121.25	14.50	.....
81	Coronation	Sept. 15	546	694.00	.....	.....
82	Griffin Creek	.....	.....	.....	.....	.....
83	Carbon	.....	.....	.....	.....	.....
84	Gopher Head	.....	.....	.....	.....	.....
85	Winifred	.....	.....	.....	.....	.....
86	Gadsby	Oct. 5	251	425.00	.....	.....
87	Edson	Sept. 8	582	839.25	12.00	.....
88	Spirit River	.....	.....	.....	.....	.....
89	Chinook	Aug. 13	732	690.50	151.00	.....
90	Youngstown	Sept. 20-21	410	351.50	99.25	.....
91	Consort	Oct. 29-30	520	635.25	.....	.....
92	Grassy Lake	.....	.....	.....	.....	.....
93	Rocky Mountain House	Sept. 20-21	797	488.25	.....	.....
94	Big Bend	.....	.....	.....	.....	.....
95	Manyberries	.....	.....	.....	.....	.....
96	Westlock	Sept. 21	650	539.75	.....	.....

EXHIBITION STATEMENT.—(Continued).

SOCIETY		Date of Exhibition	No. of Entries	Amount Paid in Prizes at Exhibition	Amount Paid in Prizes for Sports	Amount Paid in Prizes Field Grain Competition
97	St. Paul	Sept. 14-15	203	\$ 290.50	\$ 106.50	
98	Stammore					
99	Wheatstear	Sept. 3	239	210.25	40.05	
100	Highland	Sept. 24-25	585	462.00		
101	Impress					
102	Hanna					\$ 150.00
103	Rumsey					
104	Bashaw					
105	Vulcan	Oct. 21-22	306	293.00	125.00	
106	Berry Creek	Sept. 24	390	254.00	69.95	150.00
107	Waterhole	Sept. 17	307	413.00	86.00	
108	Oyen	Aug. 11	286	279.30	121.00	
109	Donalda					
110	Flaxland					
EXHIBITION ASSOCIATIONS						
200	Lethbridge			16,785.25	10,730.00	
202	Calgary	June 30-July 7	6340	16,449.00	13,062.50	
203	Edmonton	Aug. 9-14	6977	1,464.45	154.50	
204	Athabasca	Sept. 21-22	806			

EXHIBITION STATEMENT. (continued).

	SOCIETY	Amt. Paid in Prizes at Seed Fair	Amt. Paid in Prizes at Stallion Show	Amt. Paid in Prizes at Poultry Show	Amt. Paid in Prizes Good Farms Comp.	Govt. Grant to be Paid 1916
1	Cardston	.....	.....	.....	.....	\$ 528.83
2	Magrath	86.00	.....	\$ 252.00	.....	1,225.83
3	Didsbury	34.00	.....	.....	.....	764.16
4	Imisfail	91.00	.....	.....	\$ 100.00	1,844.82
5	Lacombe	82.00	.....	.....	.....	1,443.83
6	Red Deer	.....	.....	.....	.....	3,133.83
7	Macleod	.....	.....	.....	.....	.....
8	Medicine Hat	.....	.....	.....	.....	.....
9	Olds	114.00	.....	.....	.....	699.00
10	Pincher Creek	.....	.....	.....	.....	350.33
11	Ponoka	50.00	.....	.....	.....	1,426.81
12	Raymond	.....	.....	.....	.....	1,490.18
13	.....	.....	.....	.....	.....	.....
14	Okotoks	37.00	.....	81.50	.....	793.00
15	Vegreville	80.00	.....	.....	.....	1,491.83
16	Wetaskiwin	.....	.....	.....	.....	1,989.80
17	Leduc	70.00	.....	.....	.....	2,249.10
18	Nanton	.....	.....	.....	.....	.....
19	Vermilion	70.00	.....	.....	.....	1,801.99
20	High River	.....	.....	.....	.....	926.06
21	Priddis and Millarville	52.00	.....	.....	.....	594.00
22	Viking	62.00	.....	.....	.....	845.83
23	St. Albert	.....	.....	.....	.....	.....
24	Manville	.....	.....	.....	.....	1,231.00
25	Stettler	.....	.....	.....	.....	846.83
26	Daysland	64.00	.....	.....	.....	897.66
27	Clareholm	74.00	.....	.....	.....	698.70
28	Milnerston	.....	.....	.....	.....	903.66
29	Irvine	.....	.....	.....	.....	.....
30	Taber	.....	.....	.....	.....	1,683.33
31	Imisfree	50.00	.....	.....	.....	1,815.33
32	Sedgewick	88.00	.....	.....	.....	1,072.66

EXHIBITION STATEMENT.—(Continued).

	SOCIETY	Amt. Paid in Prizes at Seed Fair	Amt. Paid in Prizes at Stallion Show	Amt. Paid in Prizes at Poultry Show	Amt. Paid in Prizes Good Farms Comp.	Govt. Grant to be Paid 1916
33	Alix					\$ 320.50
34	Lloydminster	\$ 70.00				3,278.66
35	Camrose					1,894.06
36	Gleichen	84.00				515.83
37	Three Hills					765.66
38	Irma	81.00		\$ 31.50		727.17
39	Crossfield					1,325.88
40	Airdrie					
41	Bowden	82.00				629.00
42	(Closed)					
43	Wahamun					
44	Falls and Rexboro					
45	Holden					599.66
46	Cochrane	94.00				1,215.86
47	Stavely	43.00		96.00		880.00
48	Tofield					729.76
49	Strome-Killam					
50	Trochu					700.66
51	Fort Saskatchewan					1,053.13
52	Graum					961.80
53	Langdon	63.00				783.00
54	Grande Prairie					1,071.33
55	Castor					499.33
56	Kitscoty					850.66
57	Stony Plain	73.10			\$ 90.00	1,442.20
58	High Prairie					277.50
59	Rawdonville					728.66
60	Entwistle					652.50
61	Carmanagay					679.16
62	Provost	53.00		49.50		722.83
63	Strathmore					
64	Mid-Pembina					366.16

EXHIBITION STATEMENT. (Continued)

	SOCIETY	Amt. Paid in Prizes at Seed Fair	Amt. Paid in Prizes at Stallion Show	Amt. Paid in Prizes at Poultry Show	Ant. Paid in Prizes at Farm Comp	Govt. Grant to be Paid 1916
65	Hardisty	.....	.....	.....	.....	.....
66	Paddle River	.....	.....	.....	.....	\$ 515.17
67	Acme	.....	.....	.....	.....	.....
68	Warner	.....	.....	.....	.....	503.66
69	Elk Point	.....	.....	.....	.....	599.66
70	Wainwright	.....	.....	.....	.....	1,080.50
71	North Alberta	\$ 77.00	.....	.....	.....	1,032.33
72	Edgerton	99.90	.....	.....	.....	984.06
73	Munson	.....	.....	.....	.....	57.00
74	Legal	.....	.....	.....	.....	53.00
75	Chauvin	42.00	.....	.....	.....	532.00
76	Lake Saskatchewan	.....	.....	.....	.....	.....
77	Onoway	.....	.....	.....	.....	412.50
78	Nakamun and district	.....	.....	.....	.....	330.40
79	Bassano	.....	.....	.....	.....	.....
80	Hays	58.00	.....	.....	.....	883.50
81	Coronation	.....	.....	.....	.....	594.66
82	Griffin Creek	.....	.....	.....	.....	.....
83	Carlton	.....	.....	.....	.....	.....
84	Gopher Head	.....	.....	.....	.....	.....
85	Winnifred	.....	.....	.....	.....	.....
86	Gadsby	.....	.....	.....	.....	385.33
87	Edson	.....	.....	.....	.....	623.50
88	Spirit River	.....	.....	.....	.....	.....
89	Chinook	.....	.....	.....	.....	575.33
90	Youngstown	.....	.....	.....	.....	341.33
91	Con-ort	63.00	.....	.....	.....	573.50
92	Grassy Lake	.....	.....	.....	.....	.....
93	Rocky Mountain House	.....	.....	.....	.....	416.50
94	Big Bend	.....	.....	.....	.....	.....
95	Manyberries	.....	.....	.....	.....	.....
96	Westlock	.....	.....	.....	.....	447.83

EXHIBITION STATEMENT.—(Continued).

	SOCIETY	Amt. Paid in Prizes at Seed Fair	Amt. Paid in Prizes at Stallion Show	Amt. Paid in Prize, at Poultry Show	Amt. Paid in Prizes Good Farms Comp.	Govt. Grant to be Paid 1916
97	St. Paul	.....	.....	.....	.....	\$ 299.66
98	Stammore	.....	.....	.....	.....	.....
99	Wheatsheaf	\$ 17.00	.....	.....	.....	183.02
100	Highland	.....	.....	.....	.....	394.00
101	Empress	.....	.....	.....	.....	100.00
102	Hanna	.....	.....	.....	.....	.....
103	Rumsey	.....	.....	.....	.....	.....
104	Rashaw	.....	.....	.....	.....	.....
105	Vulcan	.....	.....	.....	.....	258.33
106	Berry Creek	.....	.....	.....	.....	371.33
107	Waterhole	.....	.....	.....	.....	365.33
108	Oyen	.....	.....	.....	.....	261.20
109	Donalda	.....	.....	.....	.....	.....
110	Flaxland	.....	.....	.....	.....	.....
EXHIBITION ASSOCIATIONS						
200	Lethbridge	.....	.....	.....	.....	13,000.00
202	Calgary	.....	.....	.....	.....	13,000.00
203	Edmonton	.....	.....	.....	.....	13,000.00
204	Athabasca	.....	.....	.....	.....	976.30

Respectfully submitted,

ALEX. GALBRAITH,
Superintendent of Fairs and Institutes.

REPORT OF THE SUPERINTENDENT OF WOMEN'S INSTITUTES

SIR,—I have the honor to submit herewith the Women's Institute Annual Report for 1915.

The past year has been a time of unusual activity in the Women's Institute of Alberta. Not only have the branches developed greatly in numbers but also in volume and effectiveness of work. On January 1st, 1915, our Branch Institutes numbered 42, with a membership of 1,400. On December 31st, 1915, they numbered 107 Branches, with a membership of 3,000 women, an increase of 65 Branches, and 1,600 members.

PATRIOTIC AND RELIEF WORK.

During the past year the Branches have contributed \$6,459.00 to the various war funds, and have also sent forward hundreds of packages of clothing and Red Cross supplies. The Red Cross work has been taken up most energetically by almost all Branch Institutes, each member endeavoring to do her part in the defence of the Empire. When we consider the busy life and the many duties of the women living on the farm, the value of the work is indeed appreciated. Much has also been accomplished toward the relief of the destitute in the Province. One branch alone contributed over six hundred dollars. Many others supplied food, fuel and clothing.

NEIGHBORHOOD IMPROVEMENT.

Although the work of the Institute since the beginning of the war has been directed almost exclusively to assisting the Red Cross, Belgian Relief, and patriotic organizations, considerable local work has also been accomplished. Many Branches have held flower shows and bread-making contests, established rest rooms for the benefit of the women from the country, and organized market days. Other local improvement work has also received their attention. An effort is being made by many of our Branch Institutes to establish medical inspection for rural schools, and to provide trained nurses for remote rural districts. They purpose as soon as the necessity for Red Cross work has ceased, to direct their energies more particularly to this end.

ANNUAL CONVENTION.

The first annual convention of the Alberta Women's Institute was held in the Provincial School of Agriculture at Olds, on February 17th and 18th. The convention took place in conjunction with the Agricultural Fairs Association Convention. The meetings were remarkably well attended, about one hundred delegates being present, and the proceedings throughout were marked by a whole-hearted earnestness which augured well for the subsequent success of the organization.

The address of welcome was delivered by the Hon. Duncan Marshall, Minister of Agriculture. He stated that he was especially pleased to have the convention meet at a place where they could have an opportunity of seeing for themselves the work done at one of the schools of agriculture. The Minister said that at present the number of boys in these schools was about four times the number of girls, but he hoped that in the future this would be changed, as there was no reason why educational advantages

should not be secured equally to girls and boys on the farms. He stated that one object of the schools was to teach the girls to fulfil their various duties in a better and more scientific fashion. They would thereby obtain satisfaction out of their work—a very important thing. He expected great things from the missionary work which the Women's Institutes would perform throughout the Province.

The other numbers on the programme were as follows:

February 17th.

Address—Superintendent of Women's Institutes.

Election of Officers.

Address—Woman's Place in the Development of Alberta—Mrs. E. L. Hill, Edmonton.

Demonstration—Dairying—Mr. H. S. Pearson, Department of Agriculture.

In the evening the Women's Institute and Fairs Association Delegates were entertained at a banquet given by the staff and students of the Olds Agricultural School.

February 18th.

Address—The Efficient Woman in the Home—Mrs. Muldrew, Principal Ladies' College, Red Deer.

Discussion.

Paper—Value of Keeping Household Accounts—Miss A. T. Carlyle, Vermilion Agricultural School.

Demonstration—Table Service Setting—Miss M. Goldie, Olds Agricultural School.

Discussion.

Address—Social Life in Country Homes—Mrs. Nellie McClung, Edmonton.

Address—Poultry—Mr. A. W. Foley, Department of Agriculture.

Paper—Home Furnishings—Miss M. Hayward, Claresholm Agricultural School.

Address—Miss I. Noble, Daysland.

With a view to bringing about closer relations between the Women's Institute Branches and the Department of Agriculture, it was thought advisable to ask the delegates to elect representatives to act upon the Advisory Board, this Board to be known as the Provincial Advisory Board of Alberta Women's Institutes, and to consist of the Superintendent of the Women's Institutes and the following officers elected at each Annual Convention: A President, two Vice-Presidents, a Secretary-Treasurer and six Directors.

DUTIES OF THE ADVISORY BOARD.

The Board shall confer with and advise the Honourable The Minister of Agriculture on the work of the Institute in general and shall arrange for annual conventions.

SUPERINTENDENT.

With the assistance of the other members of the Provincial Board of Directors, she shall arrange for the Annual Convention.

She shall conduct the correspondence with and relating to the Branches; supervise the organization and work of the Institute; arrange for regular and supplementary delegates to be present and address

meetings; prepare and distribute circular letters; receive and publish reports; supply all required books, forms, or other matter to local secretaries; and prepare and issue from time to time suggestions to officers of Branch Institutes.

She shall call all meetings of the Provincial Advisory Board and Executive Committee.

PRESIDENT.

The President shall preside at the Annual Convention and at all other meetings held by the Provincial Advisory Board and by the Executive Committee. In her enforced absence the Vice-President shall preside. She shall direct the Secretary in carrying out the plans of the Board and otherwise fulfil the duties of her office.

SECRETARY-TREASURER.

The Secretary-Treasurer shall be the executive officer of the Board. She shall keep a record of all proceedings of the meetings of the Board and of the Annual Conventions and of special meetings.

She shall also give a statement of all funds received by her with a record of disbursements and report to the Department of Agriculture.

DIRECTORS.

The Directors shall be active workers in their respective branches and do all in their power not only to further the interests of their local society but also to extend and assist the work throughout the Province. They shall advise the Superintendent of possible organizations and report on the features of the work best suited to their community.

The officers elected were as follows:

President—Miss I. Noble, B.A., Daysland.
 1st Vice-President—Mrs. Fleming, Sedgewick.
 2nd Vice-President—Mrs. Elves, Vulcan.
 3rd Vice-President—Mrs. A. E. Saunders, St. Albert.
 Secretary—Mrs. J. Muldrew, Red Deer.

DIRECTORS.

Mrs. Robinson, Cowley	Mrs. A. F. Wilson, Carmangay
Miss A. Paterson, Taber	Mrs. Colvin, Sedgewick
Miss Robb, Provost	Mrs. Blackwell, Athabasca

INSTRUCTION AND LIBRARY WORK.

During the year several additions were made to the corps of Institute Lecturers, and without exception they have shown marked ability and have met with unusual success. In the months of April, May and June the Institutes were visited by Miss Coates, a trained nurse, and by three Directors of Household Science in the Provincial Schools of Agriculture, Misses Carlyle, Goldie and Hayward. These ladies gave lectures and demonstrations in Cooking, Sewing, Laundry Work and Home Nursing. Several Branches also had the privilege of listening to addresses by Miss Isabel Noble and Mrs. J. Muldrew.

In July and August, eight Branch Institutes were visited by the Mixed Farming Special Train. On this train two cars were reserved for women's work, one for lecture and demonstration purposes and the other

contained a display from the Domestic Science and Women's Institute Department. Many women availed themselves of the privilege thus offered, the attendance ranging from 100 to 500 women.

During the year bulletins, books, papers and articles on numerous subjects were sent upon request to members of various branches, thus assisting them in the preparation of papers and addresses for their monthly meetings. Many branches also received our Travelling Library.

EXPANSION OF INSTITUTE FUNCTIONS.

In visiting the various branches during the year one could not fail to be struck with the fact that in every place the real value of the Women's Institute and all that it may mean to the home and life of our people in general, seemed to be realized.

The Women's Institute Branch feels that one of the most interesting results of its work is that the Institutes have come to regard it as a bureau of information. It is a gratification to find that each year more housekeepers present their problems and ask for information regarding food and other matters of home management. Such close relations with the housekeeper and the Women's Institute Branch seem to demonstrate not only that this work of the Department for the homemaker is of scientific value but also that it is of direct practical aid to the housekeepers of the Province of Alberta in their efforts for efficient and rational home life.

No one realizes more clearly than those concerned in it how broad is the field for such work, and how few relatively of the housekeeper's problems have had the careful study they merit. Household equipment, labor saving devices, home conveniences, home sanitation and hygiene, the relation of right methods of work to the prevention of fatigue—these are some of the topics which are as much in need of study as are questions of food and economies of the household. It speaks well for the housekeeper's interests in the future that the Department of Agriculture through the Women's Institute Branch is giving the matter attention and endeavoring so to adjust its activities that it may still further meet the housekeeper's needs.

ALBERTA WOMEN'S INSTITUTES.

Following is a list of the Alberta Women's Institute Branches, their Secretaries and Post Office Addresses:

Name of Branch	Secretary	Post Office	No.
Argyle	Miss E. Ritchie	Flagstaff	31
Athabasca	Mrs. Bannerman	Athabasca	43
Bawlf	Mrs. A. Reesor	Bawlf	50
Barons	Mrs. W. H. Sherwood	Barons	65
Brant	Mrs. L. Merrick	Brant	66
Bassano	Mrs. L. A. Volkers	Gem	67
Cardston	Mrs. C. E. Cameron	Cardston	2
Carmangay	Mrs. C. W. Folk	Carmangay	3
Crossfield	Mrs. Louise Scholefield	Crossfield	4
Cowley	Mrs. J. Snyder	Cowley	5
Coronation	Mrs. Helmbolt	Coronation	6
Consort	Lauretta Garvey	Loyalist	7
Chesterwold	Mrs. Lawrence Doran	Ponoka	23
Clearview-Springvale	Mrs. E. Eversole	Red Deer	27
Claresholm	Miss Constance Brown	Claresholm	45
Craigmyle	Mrs. L. F. Farrow	Craigmyle	68
Chinook	Mrs. Idah Stevenson	Chinook	69

Name of Branch	Secretary	Post Office	No.
Conjuring Creek	Miss Frances Ferris	Conjuring Creek	70
Clemens	Miss Cora Brodie	Clemens	71
Champion	Mrs. G. F. Smith	Champion	72
Daysland	Miss Nina Wells	Daysland	8
Didsbury	Mrs. H. W. Chambers	Didsbury	9
Donalda	Mrs. W. T. Pickering	Donalda	73
Delburne	Mrs. Jas. H. Brown	Delburne	74
Delia	Mrs. E. A. Thompson	Delia	75
Edson	Miss Julia Foster	Edson	51
Entwistle	Mrs. J. E. Campbell	Entwistle	64
Endeavour	Mrs. Jas. Milne	Edgerton	77
Excelsior	Miss Ruth Sigman	Sibbald	78
Elnora	Mrs. W. E. Hannam	Elnora	79
Edith Cavell	Mrs. J. W. Gilbert	Deering P.O. via Retlaw	105
Fort Saskatchewan	Mrs. A. H. Rogers	Ft. Saskatchewan	52
Foremost	Miss Ida M. Roberts	Foremost	80
Fairacres	Mrs. M. F. Ihde	Fairacres	81
Glenelg	Mrs. C. E. Meyers	Pine Lake	22
Gleichen	Mrs. John McArthur	Gleichen	53
Golden Centre	Mrs. Martin Danielson	Seal	82
Galahad	Mrs. C. A. Hogan	Galahad	83
Huxley	Mrs. D. J. Kennedy	Huxley	12
Hardisty	Mrs. H. B. Wood	Hardisty	54
Holden	Mrs. Lottie B. Stewart	Holden	55
Hanna	Mrs. Ernest R. Moore	Hanna	84
Irma	Mrs. P. J. Hardy	Irma	14
Innisfail	Mrs. A. B. McGorman	Innisfail	48
Innisfree	Mrs. E. M. Burns	Innisfree	56
Knappen	Mrs. W. R. Humphry	Knappen	15
Killam	Miss Leanora	Killam	57
Kinsella	Miss E. M. Bamsey	Kinsella	103
Lea Park	Mrs. E. S. Babcock	Riverton	1
Lacombe	Miss Gertrude Poole	Box 192, Lacombe	16
Leavitt	Mrs. Louise Coombs	Leavitt	58
Lousana	Mrs. J. W. Smith	Lousana	85
Magrath	Mrs. Lettie Cribfield	Magrath	17
Munson	Mrs. W. B. Walrod	Munson	18
Merna	Mrs. C. P. Chevalier	Galahad	39
Major	Mrs. H. Gaily	Major	42
Mountain View	Mrs. R. C. Emerson	Didsbury	59
Milk River	Mrs. I. Mantle	Milk River	86
Nightingale	Mrs. J. A. McKenzie	Nightingale	87
New Dayton	Mrs. L. B. Duncan	New Dayton	88
New Norway	Mrs. W. Osborne	New Norway	89
Okotoks	Mrs. W. Hurst	Okotoks	19
Olds	Mrs. H. F. Felkner	Olds	44
Oyen	Mrs. E. D. Thygesen	Oyen	90
Pincher Creek	Mrs. W. H. Upton	Pincher Creek	20
Pakowky	Mrs. J. C. M. Aldous	Gahern	11
Provost	Mrs. Margaret Robb	Provost	21
Prairie Circle	Mrs. H. O. Hille	Cereal	91
Queenstown	Mrs. J. T. Robinson	Queenstown	24
Rugby	Mrs. Margaret Parkers	Didsbury	10
Raymond	Mrs. Ed. Nilsson	Raymond	25
Red Deer	Mrs. F. C. Whitehouse	Red Deer	26
Reid Hill	Miss Beatrice Smith	Reid Hill	28
Ryley	Mrs. A. J. Thorsley	R. 3. Tofield	92
Rumsey	Miss Rose V. Sauve	Rumsey	93
Richdale	Mrs. W. Pinkerton	Richdale	94
St. Albert	Mrs. N. Poirier	St. Albert	29
Stettler	Mrs. Jas. K. Creighton	Stettler	30
Stony Plain	Mrs. R. E. Wood	Stony Plain	32
Strathmore	Mrs. Patrick	Strathmore	33
Sibbald	Mrs. Lillie Dickson	Sibbald	49

Name of Branch	Secretary	Post Office	No.
Strome	Mrs. W. Huycke	Strome	60
Standard	Mrs. K. L. Lawrence	Standard	76
Sounding Creek	Miss W. Lennox	Youngstown	95
Stavely	Miss Erlena M. Shimp	Stavely	97
Trochu	Mrs. Nellie Sheridan	Trochu	34
Taber	Miss A. M. Paterson	Taber	35
Talbot	Miss Frankie Cassells	Talbot	36
Tofield	Mrs. A. C. Dodds	Tofield, Box 82	61
Three Hills	Mrs. W. S. Giddings	Three Hills	96
Vulcan	Mrs. E. C. Knowles	Vulcan	37
Verdant Valley	Mrs. J. E. Howarth	Rainbow	38
Viking	Mrs. W. E. Goodwin	Viking	41
Vermilion	Miss Dorothy Thompson	Vermilion	46
Walsh	Mrs. J. Macdonald	Walsh	40
Wetaskiwin	Mrs. R. C. Enman	Wetaskiwin	47
Warner	Mrs. Florence Campbell	Warner	62
Wainwright	Mrs. J. A. White	Greenshields	63
Wide Awake	Mrs. H. F. Cornwall	Milk River	98
Wrentham	Mrs. A. P. Helhan	Wrentham	99
Whitelands	Miss Florence White	Cereal	100
Wavy Plains	Miss Grace Bray	Sibbald	101
Winterburn	Mrs. Carruthers	Winterburn	102
Rollinson	Mrs. Geo. N. Johnston	Rollinson	104
Rush Centre	Miss Ida Muhlbach	Muhlbach	106
Bashaw	Mrs. Theo Sharp	Bashaw	107
Chauvin .....	.....	Chauvin	108

Respectfully submitted,

MARY MACISAAC,
Superintendent of Women's Institutes.

REPORT OF THE SUPERINTENDENT OF THE SEED AND WEED BRANCH

SIR,—I beg to submit herewith the report of the Superintendent of the Seed and Weed Branch.

It is a pleasure to be able to report that during the year 1915 the weed work has been less difficult than it has been for the past two or three years. This is due to the fact that there were enormous crops throughout the Province, and good crops are no doubt the best weed eradicators we can have in districts where Russian Thistle and Tumbling Mustard are established. Good crops are really more effective in exterminating all kinds of weeds than most special methods for their destruction are. Besides this, when the farmers have good crops they pay more attention to their summer-fallows and to stray weeds around the farm. They have more heart to fight the weeds than they have if they are fighting crop failures at the same time.

During the year fifty-six weed inspectors were engaged by the Department. About the same number were employed by the rural municipalities in the Province. The inspectors in the south were appointed in some districts as early as May 1st, while in the northern portion of the Province they were not appointed until July. The dates of appointments and the size of their districts were determined by the kind and prevalence of the weeds.

From the reports of the local weed inspectors, the observations of the Department's staff, and correspondence filed in the office, it appears that the weed situation is better at this date than it has been for three or four years.

One of the obstacles which the weed branch has to meet is the fact that many hundreds of homesteads have been vacated where sometimes thirty or forty acres have been cultivated and then let run to weeds. The owner generally lives in some foreign country where our laws will not reach him. The cleaning of this land by the Department is impossible, as it would cost many thousands of dollars. There are also a number of large farms consisting of from five to twenty thousand acres similarly overrun with weeds. These farms have been started by companies which have broken large tracts, but eventually failed, and the lands stand in litigation. Thus nobody can be made responsible for the weeds growing on them.

During the year six hundred threshing machines were inspected by the provincial inspectors. This work proved to be quite necessary, as it was found that a large number of the machine men were making no effort to comply with the laws and had not registered their machines with the Department. This was the first year that a serious campaign has been made in connection with the inspection of threshing machines, and the Department hopes to continue this work.

In March and April, 1915, the Department inspected about one hundred and fifty cars of seed grain distributed by the Dominion Government during these months. It was not possible to inspect all of it. However, points were selected in districts where this grain was distributed, and from one to five cars were examined at each point. We believe that this gave us a fair average of the grain distributed, and I am pleased to state that considering the amount of grain the Dominion Government

distributed for seed, it was of very good quality and reasonably free from noxious weeds. The following table will show the number of samples tested, with the total number of noxious and other weeds:

Barley	5	samples	45	noxious weeds	307	other weeds
Wheat	50	"	224	"	1023	"
Oats	70	"	383	"	1210	"

On the "Mixed Farming Special," which travelled over a large portion of the Province, we carried samples of the different weeds in cases, as well as samples of grains and grasses in the straw and grain. Two men were in charge of the car and discussed questions relating to seeds, grains, grasses and weeds with the public. There were distributed also many thousands of weed bulletins, grain bulletins, copies of the Noxious Weed Act, etc.

This branch sent speakers to a large number of institute meetings, as well as to each short course school held in the Province last spring.

Practical lectures were delivered at forty seed fairs.

A large number of weed bulletins have been forwarded to schools and colleges, and many direct to the school children. The edition of 25,000 copies which we had printed three years ago is now exhausted. A revised edition is now in preparation.



CLEANING UP AS THEY GO.

SHEEP AND WEED ERADICATION.

There is at present a prospect for improvement in the weed situation by reason of the increase of sheep flocks in the Province. This applies to the special grain area of Southern Alberta to a greater extent perhaps than to the mixed farming districts, though the demand for sheep is very active everywhere. Small range flocks have increased but the most important feature of the increase has been the fitting of sheep flocks to farm enterprises. On the farms, small flocks are being introduced to use up the odd foods of the farm, to furnish fresh meat, and to yield a satisfactory profit as well as to keep the fields and lanes and yards free from weeds.

In the southern part of the Province, they are being used on the summer-fallows. The tendency to large operations often makes it hard for the farmer to keep down the weeds on the summer-fallow, especially during the time of most rapid growth. The running of a flock of sheep over the summer-fallow where the weeds are getting ahead of the farmer often saves one cultivation, besides packing and fertilizing the summer-

fallow and promoting rapid improvement in sheep and lambs. In many of the parts where the land is light and open in texture, too frequent cultivation is not desirable and if sheep are run over such land to keep down weeds, they pack the land better than it can be done in any other way. Sheep are bound to be of the greatest use to the grain farmer in the future. Many have already learned to use them to advantage.

LIST OF WEED INSPECTORS.

Beard, H. A.	Taber
Burns, W. H.	Reid Hill
Benoit, A. H.	Nobleford
Blonquist, C. J.	Calmar
Barrett, E. W.	Kanata
Bennett, S.	Raymond
Barsoockoff, A. E.	Wahstao
Christie, V.	Cardston
Callaway, E. J.	Cochrane
Capron, Jos.	Blackfalds
Emmett, R. L.	Priddis
Elliott, T. J.	Pincher Station
Earl, J. K.	Hopkins
Foster, J. D.	Edmonton
Gaudette, P. S.	Morinville
Giles, W. H.	Munson
Gillies, A. C.	Bowell
Goddard, J. H.	Hilda
Harrison, H. C.	Magrath
Hutton, G. H., Sr.	Lacombe
Hopewell, Ed.	Del Bonita
Hayes, N. N.	Gleichen
Hall, G. B.	Cayley
Haines, L. A.	Turin
Johnson, S. H.	Leduc
Johnston, R. J.	Parkland
Jevne, T. R.	Wetaskiwin
June, Robt.	R.R. 1, Edmonton
King, David	Lethbridge
Kerr, K. A.	Innisfail
Lynn, Edward	Albion Ridge
Mohan, Thos.	Warner
Murray, George	Seven Persons
McDougall, Dan.	Winnifred
McCarty, Chas.	Raymond
McGowan, R. J.	Killam
McCartney, John	Cadogan
McArthur, D. K.	Trochu
McLeod, Wm.	Blackfalds
Pearson, Geo.	Macleod
Robinson, H. L.	Eyremore
Ries, David	Masinasin
Rasmuson, E. R.	Wetaskiwin
Raby, Geo.	Cochrane
Smibert, G. H.	Elkwater
Smith, Frank	Stettler
Stafford, Norman	Brooks
Struthers, R. H.	Bassano
Sobey, E. S.	Alderson
Soucy, J. C.	Cold Lake
Taylor, E. J.	Barnwell
Taylor, T. H.	Vermilion
Thompson, M. S.	Pendant d'Oreille
Workman, J. M.	Claresholm
Wilson, B. Lea.	Monitor
Woolf, DeVoe	Raymond

FIELD GRAIN COMPETITIONS.

In 1915 there was an increase of five competitions over 1914, and there would have been a larger increase had it not been that agricultural societies are trying, like everyone else, to curtail expenses. The competitions were larger than in previous years, inasmuch as that this was the first year that the societies took advantage of the many new classes set out by the Department, on which they could receive assistance from the Government in the way of grants. In previous years competitions were restricted to cereals such as wheat, oats, barley and flax. Under the new regulations they are now able to offer prizes for cereals, besides hay, grasses for seed, fodder, corn, field roots and garden vegetables. The result is that many societies offered prizes in no less than eight classes and paid prizes amounting to as high as \$100.00. This necessitated the judges having to spend as many as four days for one competition.

Glancing over the final returns it will be noticed that wheat was the most popular competition, while potatoes were second. Field roots and garden vegetables were included in many of the competitions. Barley and flax were less important than in 1914. The Taber Agricultural Society included corn, and from the report of the judge it was highly satisfactory. The judge's reports show that the classes of exhibits this year were much superior to those of other years, indicating that greater attention is being given to pure seed, the treatment of seed before sowing, etc. One or two cases of grain aphids were reported.

In some cases the rules and regulations set out by the Department regarding these competitions are not carried out satisfactorily, as no effort is made to set out the portion to be judged from the remainder of the crop.

The following is a list of Societies which undertook the work of holding standing field grain competitions, together with the dates on which they were held, and the names of the judges.

NAME OF SOCIETY	DATE OF COMP.	JUDGES.
St. Albert	Aug. 4.....	G. H. Hutton.
Daysland	Aug. 9.....	J. A. Nolan.
Three Hills	Aug. 17.....	J. A. Nolan.
Colinton	Aug. 6.....	J. D. Foster.
Edgerton	Aug. 11.....	L. Shanks.
Provost	Aug. 10.....	J. A. Nolan.
Sedgewick	Aug. 6.....	J. A. Nolan.
Vermilion	Aug. 10.....	G. H. Hutton.
Camrose	Aug. 9.....	G. H. Hutton.
Empress	Aug. 4.....	L. A. Pary.
Vegreville	Aug. 10.....	R. J. McGowan.
Leduc	Aug. 19.....	J. D. Foster.
Taber	Aug. 9.....	A. S. Longman.
Wainwright	Aug. 19.....	L. Shanks.
Swatwell	Aug. 19.....	J. A. Nolan.
Strome-Killam	Aug. 5.....	G. H. Hutton.
Raymond	Aug. 26.....	H. A. Scott.
Macleod	Aug. 14.....	A. S. Longman.
Stony Plain	Aug. 17.....	R. J. McGowan.
Mannville	Aug. 12.....	R. J. McGowan.
Berry Creek	Aug. 11.....	L. A. Pary.
Lacombe	Aug. 17.....	J. D. Foster.

SEED FAIRS.

During the winter forty seed fairs were held, an increase of eight over the previous winter. During the extremely cold weather of January some of these fairs were not as large as they otherwise would have been.

secretaries reporting that the weather was too cold for the farmers to bring in their exhibits. Other fairs were much larger than in previous years. At Olds, for instance, there were forty entries. The judges report an improvement in the grade of grain, and that exhibits were more nearly free from noxious weed seeds. The absence of smut was very noticeable, showing that farmers are realizing the importance of treating their grain before sowing. Never in the history of seed fairs have there been fewer reports of frosted grain. The weight per bushel of the grain exhibited was unusually high.

The Provincial Seed Fair was held in conjunction with the Calgary Fat Stock Show, at Calgary, and although the number of entries was not as large as in some previous years, the samples were good, and keen competition in every class resulted.

Twenty-five hundred reports of the Field Grain Competitions, Seed Fairs and Provincial Seed Fair were printed and mailed throughout the Province. These reports give information as to the kind of grain exhibited, the prizes won, the number of bushels each exhibitor has for sale and the prices. Judging from the demand for these reports it is evident that the Department is justified in encouraging these fairs and competitions and publishing the results.

SEED FAIRS.

The following is a list of fairs held in the Province during the winter of 1915-1916, together with dates and names of judges.

NAME OF SOCIETY	DATE	JUDGES
Stony Plain	Nov. 20, 1915.....	O. Blue, E. H. Malcolm.
Vermilion	Nov. 24, 1915.....	F. S. Grisdale, E. H. Malcolm.
Lloydminster	Jan. 28, 1916.....	F. S. Grisdale, E. H. Malcolm.
Bowden	Jan. 21, 1916.....	G. H. Hutton, E. R. Rasmuson.
Nanton	Jan. 25, 1916.....	H. Mackintosh, W. J. Stephen.
Okotoks	Jan. 18, 1916.....	H. Mackintosh.
Lousana	Jan. 26, 1916.....	G. H. Hutton, E. R. Rasmuson.
Edson	Feb. 18, 1916.....	F. S. Grisdale
Irma	Jan. 12, 1916.....	E. H. Malcolm, O. S. Longmore.
Sedgewick	Jan. 20, 1916.....	G. H. Hutton, E. R. Rasmuson.
Leduc	Jan. 19, 1916.....	G. H. Hutton, E. R. Rasmuson.
Taber	Jan. 29, 1916.....	H. Mackintosh, W. J. Stephen.
Colinton	Jan. 20, 1916.....	E. H. Malcolm.
Edgerton	Jan. 25, 1916.....	Local Judges.
Tofield	Jan. 28, 1916.....	G. H. Hutton, E. R. Rasmuson.
Magrath	Feb. 16, 1916.....	H. Mackintosh, E. Barker.
Daysland	Feb. 16, 1916.....	J. D. Foster, E. R. Rasmuson.
Vegreville	Feb. 2, 1916.....	E. H. Malcolm, F. S. Grisdale.
Innisfail	Feb. 11, 1916.....	G. H. Hutton, E. R. Rasmuson.
Innisfree	Feb. 16, 1916.....	E. H. Malcolm
Milnerton	Feb. 14, 1916.....	G. H. Hutton, E. R. Rasmuson
Viking	Feb. 19, 1916.....	E. H. Malcolm.
Lacombe	Feb. 2, 1916.....	E. R. Rasmuson, A. S. Blackwood.
Oyen	Feb. 26, 1916.....	A. S. Blackwood, G. H. Hutton.
Olds	Feb. 19, 1916.....	A. S. Blackwood.
Priddis	Feb. 25, 1916.....	A. S. Blackwood.
Strome-Killam	Feb. 21, 1916.....	E. H. Malcolm.
Consort	Feb. 23, 1916.....	G. H. Hutton.
Provost	Mar. 1, 1916.....	E. R. Rasmuson.
Langdon	Mar. 2, 1916.....	A. S. Blackwood.
Cochrane	Mar. 17, 1916.....	A. S. Blackwood.

PLOUGHING COMPETITIONS.

No ploughing competitions have been held now for some years. In a country where so much poor ploughing is done and where good ploughing

is so essential to produce good returns from the land, agricultural societies should endeavour to encourage them.

GOOD FARMS COMPETITION.

Only two societies undertook to carry on this work, namely, Innisfail and Stony Plain. The judges reported that these competitions were good, and that the interest taken in them was satisfactory in every way. There is a liberal grant paid by the Government for this kind of competition, and it is to be regretted that more societies do not encourage this work.

Respectfully submitted,

J. D. SMITH,

Superintendent of Seed and Weed Branch.

REPORT OF THE POULTRY SUPERINTENDENT

SIR,—I beg to submit herewith the annual report of the Poultry Branch of the Department for the year 1915.

GENERAL.

The year 1915 generally speaking cannot be considered a good year for the poultry industry of the Province. In the fall of 1914 the market prices of dressed poultry were exceptionally low owing to the cold storages having an over supply of the 1913 crop. This was due to the financial condition resulting from the war and to other causes.

The uncertainty of market prices associated with the unusually high cost of grains, etc., in the early part of the year did not offer a very encouraging prospect to poultrymen, with the result that many of them reduced the size of their flocks, and refrained from hatching as many chickens as usual. This policy was apparently quite general with the result that the increase in poultry of the Province in 1915 would scarcely be proportionate with that of former years. It is conceded, however, that there was a fair increase in production over former years. One favorable result of the poor conditions was the discarding from the flocks of large numbers of unprofitable and undesirable birds. This will no doubt have a good influence on the future of the industry, as better breeding stock will follow.

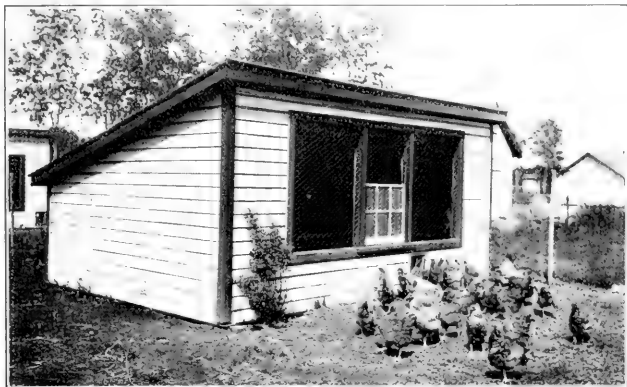
The markets of 1915 on the whole were exceptionally good. There was a good demand at all seasons of the year at good prices for both poultry and eggs with the exception of a few weeks during the flush of the egg season, when eggs became a drug on the market and prices dropped correspondingly low. During the winter months there was no severely cold weather, and this with a greater interest taken in winter egg production resulted in a more normal supply throughout the year than formerly. It is also to be noted that the importation of eggs into the Province has fallen off to a considerable extent in comparison with the large importations of the years 1913 and 1914.

CO-OPERATIVE MARKETING OF EGGS.

The Department again in 1915 offered its assistance in the organizing of the poultry and egg associations and in the marketing of poultry products. A number of districts took advantage of the services offered and satisfactory returns were obtained from the new system of marketing. The organizations were tributary to Calgary and the eggs and dressed poultry were received and sold under the direction of C. P. Marker, Dairy Commissioner. A report of this work will appear in the report of the Dairy Commissioner. A few circles have been organized in the Edmonton district, but owing to the small volume of receipts these circles were placed in relation with the Edmonton City Dairy, by which firm the patrons were paid a satisfactory price for the eggs on the quality system of payment.

For the instruction of producers in the organization of this co-operative system Mr. T. A. Benson of the Live Stock Branch, Ottawa, became a resident of this Province with the object of devoting the whole of his time to the organizing of Poultry Producers' Associations, and of supplementing the work undertaken by the Department of Agriculture of Alberta. Mr. Benson has had considerable experience in this work and it is expected that through the co-operation of the Federal and Provincial Poultry Branches a system of marketing poultry products will be estab-

lished on a thorough business basis that will prove satisfactory to the producers, dealers, and consumers throughout the Province. Detailed plans of this system of marketing are being prepared and it is hoped that during the coming year a number of organizations will be effected.



HOUSING UNIT FOR SMALL FLOCK.

EDUCATIONAL WORK.

The educational work in poultry has been carried on to a much greater extent than in former years. Instruction in poultry was given at each of the Agricultural Schools to a larger body of students than in previous years. A very thorough course was given to both first and second year students. In view of the market propaganda special attention was also given at the schools to markets and marketing.

A new poultry bulletin, "Successful Poultry Raising," was published during the spring, which proved timely, the demand being so great that at the end of the year the issue is almost exhausted. This bulletin contains considerable of the information found in previous issues together with many new illustrations and ideas that have in a practical way proved their worth within the Province.

During the months of July and August a Better-Farming Special toured the leading railway lines of the Province and one of the cars of this train included a very complete exhibit of poultry suggestions and appliances. Models of various kinds of houses, brooders, coops, interior fixtures, trap-nests, and other appointments of general interest to poultry raisers were on exhibition.

Further educational work was undertaken by way of demonstrating the value of properly fleshing poultry for market. For this purpose milk feeding demonstrations were carried on with surplus cockerels at the Provincial Poultry Plant, and by the students of the School of Agriculture at Vermilion. The birds were placed in the regulation fattening crates as illustrated and described in the poultry bulletin, and were fed on milk

and oat meal as recommended. The results obtained in each demonstration proved the value of fleshing poultry for market, not only for an economic gain in weight, but for a greatly increased price for milk fed poultry.

As will be noticed by the following reports, the gain per bird at the Provincial Poultry Plant was 36.3c., with an original value of 12c per pound live weight, and at the Vermilion School 37.36c per bird valued at 10c per pound live weight.

SUMMARY.

FATTENING REPORT, PROVINCIAL POULTRY PLANT, SOUTH EDMONTON.

No. of Birds	Weight at Start	Weight 1st week	Weight 2nd week	Weight 18 days	Total gain
76	262 lbs.	375 lbs.	400 lbs.	412 lbs.	150 lbs.
Weight of birds at end of final week					412 lbs.
Weight of birds at 12 hours fast, final week					412 lbs.
Weight of birds at 24 hours fast, final week					389 lbs.
Shrinkage between 12 and 24 hours fasting					23 lbs.
Dressed weight of birds					339 lbs.
Shrinkage between live and dressed weight					50 lbs.

FEED CONSUMED.

380 lbs. Oat chop, value	\$4.75
700 lbs. Buttermilk, value .....	.70
50 lbs. Barley chop, value	1.10
52 lbs. Shorts, value .....	.51
Total cost of feed	\$7.06

SUMMARY.

Weight of birds at commencement	262 lbs.
Weight of birds at end of experiment	412 lbs.
Gain of birds during fleshing period	150 lbs.
Dressed weight of birds	339½ lbs.
Cost of feed during fleshing period	\$ 7.06
Cost of express, boxes, etc.	
Original value of birds at 12c per lb. (262)	31.44
Total Cost	\$38.50
Receipts: 339½ lbs. dressed poultry at 19½c. per lb.	\$66.19
Profit on experiment	27.60
Profit per bird	36.3
Cost per bird	99.27

SUMMARY.

FATTENING REPORT, SCHOOL OF AGRICULTURE, VERMILION.

	Crates			Totals
	No. 1 lb. oz.	No. 2 lb. oz.	No. 3 lb. oz.	
1. Weight of 12 birds when placed in crates	54.9	57.3	53.13	165.9
2. Weight of 12 birds after 7 days	60.6	63.9	59.9	183.8
3. Weight of 12 birds after 14 days	69.7	71.0	67.0	207.7
4. Weight of 12 birds after 18 days	73.0	74.7	70.15	218.6
5. Weight of 12 birds after 24 hrs. fast	69.13	70.14	68.9	209.4
6. Weight of 12 birds after bleeding and plucking	63.6	64.9	62.5	189.15

Weights in sections 1, 2, 3 and 4 show the aggregate weights of individual birds taken after a twelve hour fast.

The average live weight of birds when crated was	4 lbs. 9 oz.
The average live weight (section 4) was	6 lbs. 1 oz.
The average dressed weight was	5 lbs. 4 oz.

	1 lb. oz.	2 lb. oz.	3 lb. oz.	Totals lb. oz.
During the first 7 days the following gains were made	5.13	6.6	5.12	17.15
During the next 7 days	9.1	7.7	7.7	23.15
During the last 4 days	*3.9	3.7	3.15	10.15
Totals	18.7	17.4	17.2	52.13
Average gain per bird	1.8	1.7	1.6	1.7

*Only 11 birds were in crate No. 1 during the last 4 days.

	No. 1 lb. oz.	No. 2 lb. oz.	No. 3 lb. oz.	Totals lb. oz.
Loss during last 12 hours fasting	3.3	3.9	2.6	9.2
Average loss per bird, 12 hours fasting ...	4.05	4.75	3.17	4.05

The loss during the first 12 hours of fasting was approximately 5 oz. per bird.

The total loss would therefore be $36 \times 5 + 146 = 326$ ounces,—an average of 9.05 ounces.

	No. 1 lb. oz.	No. 2 lb. oz.	No. 3 lb. oz.	Totals lb. oz.
Loss caused by bleeding and plucking ...	6.7	6.5	4.9	19.5
Average loss per bird by plucking	8.6	8.4	8.7	8.58

FEEDING AND FEEDS.

The quantity of feed per bird was increased from 4 ounces at the commencement of the feeding period to $4\frac{3}{4}$ ounces during the last five days.

The various ground grains were sifted to remove the coarser hulls and the finer portions then mixed with skim milk or buttermilk in the proportions of 1 lb. meal to two of the milk; the total quantity for each day was mixed 12 hours before the first feed was given.

Feed was given in troughs at 8.30 a.m. and 1.30 p.m.

Crate No. 1. was fed ground oats.

Crate No. 2. was fed ground oats, wheat and barley in the proportions of 2 of oats to 1 each of wheat and barley.

Crate No. 3. was fed a mixture of equal quantities of ground oats, barley and wheat.

COST OF FEED.

Crate No. 1 was given 61 lbs. of oat chop valued at \$1.00 per cwt. \$.61	
125 lbs. butter and skim milk at 20c .25	
	\$.86

CRATE NO. 2.

36 lbs. oat chop at \$1.00	36.0
15.75 lbs. barley at \$1.15	18.1
15.75 lbs. wheat at \$1.25	19.7
125 lbs. butter milk, etc at 20c	25
	99.3

CRATE NO. 3.

20.4 lbs. oat chop at \$1.00	20.4
20.3 lbs. wheat at \$1.25	25.4
20.3 lbs. barley at \$1.15	23.4
125 lbs. butter milk or skim milk at 20c	25.0
	94.2

Chicks were selling at 10 cents per pound live weight when these were placed in the crates.

The cost of 36 chickens weighing 165 lbs., 9 oz. at 10c per lb.	\$16.56
Total cost of feed 86c, 93.3c and 94.2c.	2.74
Total Cost	\$19.30

THE REVENUE FROM THE SALE OF 36 DRESSED CHICKEN

24 chickens, 126 lbs. at 20c per lb.	\$25.20
12 chickens, 61 lbs. at 15c per lb.	9.25
	34.45
Less Express	1.70
Total Revenue	\$32.75

COST OF PRODUCTION.

52.13 ounces of live weight gain was made for	\$ 2.74
1 lb. of gain live weight cost .....	.05.2
Cost of producing 1 lb. of gain Crate No. 1. ....	.04.66
Cost of producing 1 lb. of gain Crate No. 2. ....	.05.40
Cost of producing 1 lb. of gain Crate No. 3. ....	.05.50
The total profit on the 36 fowls was	13.45
The total profit on each bird was	37.36

Although excellent gains were made, they are not exceptional and should be exceeded on a farm having the proper type of poultry for fleshing, and a feeder having a working knowledge of the nature of the work undertaken.

In our work there were some factors which were not conducive to the making of the greatest gains.

The birds were frequently handled by students in order to obtain a knowledge of the most desirable feeding type and the individual gains made by the different types.

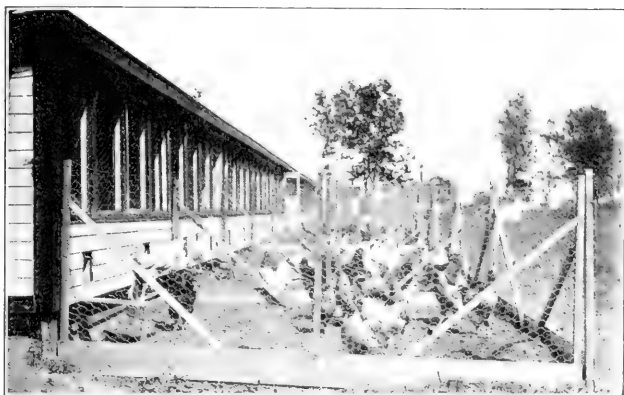
The birds were fed at intervals of 8 and 16 hours (viz 8.30 a.m. and 8.30 p.m.) 12 hour intervals would, we believe, have resulted in greater gains by the fowls.

Rather low temperatures prevailed during the fleshing period.

Had each feed been prepared 12 hours in advance, the fowls would have received at each feed the exact proportion of each day's allowance.

On the other hand we were fortunate in obtaining healthy, vigorous fowls of good type; as they were rather in thin flesh the gains were greater than could otherwise have been made. Each frame will carry only so much flesh; the proportion of flesh on the frame when birds are placed in the crates will therefore limit the gains made during the fleshing period.

The advisability of practising this system of preparing poultry for market was well summed up by Mr. Grisdale when reporting the results of his experiment when he said: "We believe the statement of our work shows conclusively that it is good business to crate feed the surplus cockerels; profits are sufficient to pay good wages to the feeder, pay the highest market price for grain as well as furnish the consumer a better fowl, thereby increasing the demand for poultry products."



HOUSING SERIES AT PROVINCIAL POULTRY PLANT.

EGG-LAYING COMPETITION.

Another feature of the work of the Poultry Branch during the year that has caused considerable interest and favorable comment was the trap-nest egg-laying competition held at the Provincial Poultry Plant commencing December 1st, 1914, and ending October 31st, 1915.

This contest was undertaken at the request of the Provincial Poultry Association and conducted under direction of the Poultry Branch.

The following Rules and Regulations were formulated to govern the competition:

1. The competition is to be carried on from November 1st, 1914, to September 30th, 1915, the date for receiving pens to be any time during the week previous to opening of the competition.

2. Each pen is to consist of six pure-bred pullets, 1914 hatch, not less than six months old. The Poultry Branch reserves the right to reject any bird or birds not considered a proper age.

3. The feathers of the right wing of each bird of the light weight varieties mentioned must be cut before forwarding to the Poultry Plant, the wing to be kept cut during the competition.

4. Any bird or birds found to be suffering from any contagious disease when delivered at the Poultry Plant will be rejected.

5. All eggs are to become the property of the Poultry Branch. Eggs under $1\frac{1}{2}$ ounces in weight or soft shelled eggs are not to be counted.

6. Any pen, the eggs from which do not attain an average weight of 22 ounces per dozen before the expiration of the first three months of the competition are ineligible for a prize.

7. The competition is to be divided into two classes:

Class No. 1.—To consist of light weight varieties.

Class No. 2.—To consist of heavy weight varieties.

8. All birds are to be housed in the regular houses of the Provincial Poultry Plant, allowing at least five square feet of floor space per bird. Note—By this plan, trap nest records will be taken, which the committee consider of great practical value to competitors and an advance step in egg-laying competition.

9. The competition will be decided by the total number of eggs laid by each pen, subject to rules 5 and 6.

10. Only one pen of any variety will be allotted to each competitor unless sufficient entries are not received. The competition committee reserves the right to refuse entries should more be received than accommodation can be provided for.

11. Competitors must not communicate with the Superintendent in charge or dictate as to how the birds should be handled or cared for. All communications are to be addressed to the Poultry Superintendent, Department of Agriculture, Edmonton.

12. Competitors' names will appear in all records published.

13. All pens, unless otherwise arranged for, will be returned to competitors at the conclusion of the competition, together with a trap-nest record of each bird.

14. No competitor shall withdraw any bird until the conclusion of the competition. Should deaths occur, competitors will be notified immediately. Sick or diseased birds or birds of depraved habits will be removed from the pens.

15. All pens entered are to be forwarded to the Provincial Poultry Plant, University Grounds, S. Edmonton. Charges prepaid by owner.

16. All pens entered must conform to these regulations, otherwise they will be subject to disqualification.

17. The decision of the Competition Committee is to be final in all cases.

ENTRY FORM.

I hereby enter one pen of(breed) pullets, hatched during the year 1914, and I affirm that this entry is made correctly in every detail, and that I will abide by the rules of the contest.

Signature

Street Address

City or town

Province of Alberta.

While egg-laying competitions are usually conducted under a system of pen records it was considered advisable to instal trap-nests and tabulate the performance of each individual bird entered in the contest. This plan proved a decided advantage in the educational work resulting from the contest, in that the individual performance of each bird was recorded as well as other matters noted in the summary issued with the final report.

Besides showing the performance of the birds individually and collectively the contest proved that with suitable housing, care and feed, much better results can be obtained than under ordinary conditions. Only a summary is given below.

A brief description of the construction of the house in which the contest was held, the grains used, and the system of feeding will be found in the summary issued at the close of the competition.

SUMMARY.

ALBERTA FIRST TRAP-NEST EGG-LAYING COMPETITION, DECEMBER 1ST, 1914, TO SEPTEMBER 30TH, 1915.

WINNING PENS.

Non-Weight VarietiesPen No. 5 Brown Leghorns 925 eggs.
Weight VarietiesPen No. 20 White Wyandottes 905 eggs.

INDIVIDUAL RECORDS OF WINNING PENS.

Non-Weight Varieties Pen No. 5, 186 183 168 161 136 92
Weight Varieties Pen No. 20, 174 167 165 146 135 116

HIGHEST INDIVIDUAL RECORDS.

Non-weight Varieties			Weight Varieties		
Pen	Hen	No. Eggs	Pen	Hen	No. Eggs
5	8419	185	7	57	183
5	8450	183	20	8488	174
8	1414	178	20	8486	167
6	8312	176	19	9656	167
8	1405	168	12	3342	167

LOWEST INDIVIDUAL RECORDS.

3	1443	65	13	3277	15
4	1432	68	9	6902	25
3	1433	75	17	1617	56
1	9685	78	13	3271	60
4	1413	91	13	3272	61

FEED CONSUMED AND COST.

Wet Mash	805 lbs.	\$ 11.78
Dry Mash	2433 lbs.	41.65
Whole Grain	2505 lbs.	44.34
Beef Scrap	746 lbs.	26.11
Grit	150 lbs.	2.40
Oyster Shell	201 lbs.	3.20
Butter Milk	500 lbs.	.50
		<hr/> \$129.98

RECEIPTS FROM EGGS.

802 eggs at 60c per dozen	\$ 40.10
979 eggs at 50c per dozen	38.35
536 eggs at 35c per dozen	15.63
5676 eggs at 30c per dozen	141.89
900 eggs at 27½c per dozen	20.62
5408 eggs at 25c per dozen	112.66
14301 Eggs	<hr/> \$369.26
Profits on eggs sold over cost of feed	\$239.28

EGG RECEIPTS BY MONTHS.

December	292 eggs.	May	2080 eggs.
January	675 eggs.	June	1648 eggs.
February	814 eggs.	July	1680 eggs.
March	2139 eggs.	August	1516 eggs.
April	2289 eggs.	September	1168 eggs.
Total Number of Eggs Laid in 10 Months		14,301	

AVERAGES FOR TEN MONTHS.

Receipts per hen	\$ 3.073½
Cost per hen	1.681½
Profit per hen	1.991½
Eggs per hen in 10 months, (Deaths considered)	121.3

Prices received for eggs: 60c, 50c, 35c, 30c, 27½c, 25c.

Average price received, 30.9c.

\$1.78 was received for the 185 eggs laid by the highest individual hen, making a net profit of \$3.70 in the 10 months.

38 cents was received for the 15 eggs laid by the lowest individual hen, causing a net loss of 70 cents on cost of feed for the 10 months.

DESCRIPTION OF HOUSE.

The birds were housed on the continuous house plan with feed room in centre. Each pen 6x12 feet. House constructed of one thickness of drop siding. Windows entirely of cotton. Pen partitions of 2 feet boards at bottom with wire above. Solid board partitions were made between each half of house to protect against draught. Inside of rear walls were lined with tar paper and studding space filled with straw behind and above roosting quarters. Regulation drop curtain in front of roosts. Interior fixtures consisted of self-feeding hoppers, sanitary drinking can and trap-nests. Ample outside runs were provided for the pens, in which green crops were grown.

SYSTEM OF FEEDING.

Throughout the competition only such grains were used as are grown within the Province. Whole grain ration in winter consisted of 2 parts wheat, 1 part barley, 1 part oats. Two parts of wheat and two parts oats during the summer months. Dry mash consisting of 4 parts bran, 1 part barley chop, 1 part oat chop, 2 parts shorts and 1% charcoal were kept constantly before the birds in self-feeding hoppers. A wet mash was fed three times each week composed of the dry mash formula to which was added alfalfa and 10% beef scrap. The wet mash was fed particularly with the object of supplying the birds with beef scrap and alfalfa. Green food consisted of alfalfa scalded and mixed with wet mash during the winter. Sprouted oats in early spring and green feed grown in runs during the summer. Grit and oyster shell were kept constantly before the birds in hoppers.

WEATHER CONDITIONS.

The weather throughout the competition may be considered most favorable. During the winter little or no cold weather was met with. Only one week of what might be called cold weather was experienced, though at no time did the thermometer register 20 below zero. It was noticed that the non-weight varieties slackened their egg yield at this time, indicating that severe weather affected them more readily than the weight varieties. It was further observed that in case of severe weather the non-weight varieties would be benefitted by having more birds in the pens to insure better warmth at night.

TRAP NESTS.

The trap-nests used were invented by the Poultry Superintendent some years ago and proved most effective. No difficulty was experienced in getting the pullets to use the nests as indicated by the fact that only 17 eggs were laid outside the traps. In most of these cases the traps were occupied by other hens. A great deal of interesting information that space will not permit mention of regarding individual characteristics were observed by using the trap-nests. As an illustration mention might be made that the highest individual record hen did not commence laying until January 21st.

HEALTH AND MORTALITY.

The health of the birds was of the best throughout. No disease appeared at any time during the contest. As a preventive against

outbreak of disease a small portion of permanganate was given in the water daily. 12 birds died during the contest, making a 10 per cent. mortality. In each case the cause of death was local. 2 birds in Pen 17 died of tuberculosis and one of inflammation of the bowels. 1 bird in Pen 1, 2 in Pen 4, 2 in Pen 9, 1 in Pen 11 and 1 in Pen 12 died of ovarian trouble; 1 in Pen 9 died of indigestion and 1 in Pen 16 of enlarged liver. It was noticeable, however, in the deaths that with three exceptions the birds that died were low in record egg production.

EFFECTS OF DEATH ON RECORDS.

While the deaths in each case affected the total eggs of the pens, upon examination it was found that it did not materially change the standing of the pens. Dead birds were not replaced as the birds were trap-nested. The replacing would not in any way affect the individual standing of birds completing the competition.

BROODINESS.

Broodiness was apparent in all the pens but four, namely, 1, 2, 4 and 8 of the non-weight varieties. 55 of the birds went through the competition without showing signs of broodiness. Of these, 35 were non-weights and 20 weights. In the non-weight varieties 16 2-3% were broody and 74½% in the weight varieties. There is no question but that broodiness affects the egg yield as illustrated in Pen 10. The hens in this pen were broody in all 40 times, with a total loss of 580 days on this account. While broodiness seriously affected egg production there was an exception in the case of Hen No. 8473 in Pen 14. On the 5th day of September this hen with 165 eggs to her credit led in the number of eggs laid by weight varieties and stood third of all birds in the competition. In the meantime she had laid 48 eggs in 48 consecutive days, had been broody five times, losing 45 days through broodiness. On September 6th this hen became broody for the sixth time and remained so for the balance of the month and lost her place in the final results.

EGG PRODUCTION.

The competition is an illustration in the matter of egg production. In December only 292 eggs were laid. There followed a gradual monthly increase until the maximum of 2289 eggs in the month of April. It will be noted that March gave a greater return than May. From April there was a gradual decline in yield each month till the close of the competition. The last two weeks of the competition showed a marked decline in yield and had the competition continued there no doubt would have been a gradual decline in receipts for the final two months of the competition year. In marketing the eggs it was noticeable that the highest price prevailed when the supply was at the lowest point and fell as the egg yield increased. The prices again rose as the egg yield decreased.

GENERAL SUMMARY.

The competition has proved a decided success. It has more than met the expectation of those directly interested. Considerable interest has been maintained not only by those who had birds entered, but by the poultry public generally. Many enquiries were received respecting the

progress of the competition, for comparison with what the correspondents' birds at home were doing. Several of the competitors wrote asking for information as to the care and feeding as they were unable to secure as good results at home.

Financially it was also a success. The gross receipts from eggs and the net profit over the cost of feed was most encouraging, especially on account of the high cost of all kinds of grain fed. The results demonstrated that there is a good profit in egg production even though feeds are high priced.

Some of the competitors not fully realizing the aims and objects of the competition sent in immature birds that made an unfavorable showing throughout. The manager reported immediately the competition commenced that 50% of the birds were too immature, so much so that one pen was returned to the owner and Pen No. 8 substituted. Special mention may be made of this pen as it did not enter the competition until January 1st, and with the handicap of one month finished third in the non-weights and fourth in the whole competition.

EXHIBITION POULTRY.

While the increase in pure-bred poultry in 1915 has been satisfactory there has been besides a marked increase in both the number and the quality of exhibition poultry. The various winter shows held throughout the Province brought out many of the best specimens ever exhibited in the West, and Eastern poultry judges spoke of the quality as being in many cases equal to the best exhibited in Eastern shows.

The 1915 Provincial Poultry Show was held at Edmonton and proved to be one of the most successful shows in the history of the Province. The Province Show had good support from the various local associations affiliated with the Provincial Association and a large entry of excellent specimens resulted. A special feature of the show was the large exhibit of superior dressed poultry, which demonstrates the possibilities of the dressed poultry industry, if given suitable attention.

Other large and successful poultry shows were held at Calgary and Lethbridge, where equally good specimens were exhibited.

THE PROVINCIAL POULTRY PLANT.

The work at the Provincial Poultry Plant during the year has been most successful. In the summer and fall of 1914 the houses, etc., were placed in a permanent position, suitable runs were provided and the working accommodation was so arranged that better results were obtained. While there was complaint throughout the Province in the matter of rearing chicks, exceptionally good results were obtained at the plant. The stock proved healthy and vigorous and of superior quality.

The demand for eggs for hatching and for baby chicks while not quite as great as in 1914 was in excess of the capacity of the plant.

The policy of the office has always been to find the requirements of correspondents if possible, and when enquiries were in excess of the supply they have been referred to breeders of the varieties of which chicks, eggs or stock were required.

Very noticeable is the continued demand from all parts of the Province for eggs, chicks, and breeding stock, indicating that poultry raisers generally are disposing of their scrub stock and improving their flocks by the introduction of pure-bred poultry.

THE POULTRY OUTLOOK.

While there has recently been a tendency on the part of many to curtail the production of poultry because of the high price of feed the outlook for the future is much more encouraging than for many years.

The European war has made enormous demands on the products of the farm and the demand for poultry products, particularly eggs, has been far in excess of the supply. Canada for the first time in fifteen years exported to Great Britain and her Allies large quantities of eggs, thereby establishing a new trade outlet and market for our eggs. By careful management of our poultry products Canada can readily compete with Irish, Dutch and Danish eggs when the war is over and find a profitable outlet for the surplus that should be produced in a country so favorable for the production of poultry.

While the increase in poultry in Alberta has been over 400% during the past fifteen years, the Province is not as yet producing the quantity of poultry products that the supplies of grain and the climatic conditions warrant.

When comparing Canadian and Provincial poultry figures with those of other countries and states it is found that poultry raising is a rather neglected industry. As an instance: the State of Iowa produces almost as great a volume of poultry products as the whole of the Dominion. Of the 29,000,000 head of poultry in Canada, 13,000,000 are credited to the Province of Ontario. The Province of Alberta has less than 3,000,000 head of poultry. What Ontario has done in poultry raising Alberta should aim to do. It is not particularly necessary that the poultry raisers of Alberta should increase the number of their poultry at present, although the results would justify the increase, but rather that more thorough and practical treatment be given to the stock on hand.

It is a satisfaction to be able to say that progress is being made. Last year, for the first time in the history of the Canadian West, the Province of Alberta shipped fresh gathered eggs in car lots to the eastern markets and received satisfactory prices. This undertaking shows the possibilities of interprovincial trade. The surplus on this occasion was but temporary, and later the Province imported eggs in car loads far in excess of the number exported.

It is gratifying, however, to know that the Province is now able to supply almost sufficient dressed poultry to meet the needs of the consuming public. In the supply of eggs we are not so fortunate. The demand is still much in excess of the supply, and eggs have been imported by the million to meet the ever increasing demands. The sending out of hundreds of thousands of dollars for eggs is a condition to be deplored in a Province the agricultural possibilities of which are as great. Particularly true is this in these times of financial stringency, when we require every dollar possible to build up a financially healthy Province, and a prosperous people.

Perhaps the greatest indifference to the industry is to be found in the farmers and producers, in that they do not realize that poultry is a big revenue producer in their farm enterprises. The estimated revenue from poultry in Alberta in 1915 was between four and five million dollars, but because the total is made up of small items, the magnitude of the industry is lost sight of. As soon as our producers give proper attention to their poultry the present revenue can be easily doubled, even without increase in numbers. This can be accomplished by better housing and feeding, and

by breeding the better class of pure-bred poultry, which at the same time would make a wonderful improvement in the class of poultry and eggs marketed.

While it is admitted that there is a marked improvement in the poultry products marketed today as compared with those of eight or ten years ago, still there is a general complaint on the part of the producer, the dealer, and the consumer. As to dressed poultry the producer complains of the price, the dealer because it is hard to dispose of, and the consumer because he gets but little for his money. This unsatisfactory condition would be eliminated if the producer were to breed a better class of poultry, and have it properly fleshed, fasted, and prepared for market.

Perhaps greater dissatisfaction exists in the marketing of eggs. Here again the remedy lies largely in the hands of the producer. The first essential is to realize that the consumer is the market, and the object should be to satisfy him, who after all is the one who pays. The consumer demands fresh eggs for which he is prepared to pay the highest price. That this first essential is not complied with, is found in the fact that less than 6% of Alberta eggs reach the consumer fresh.

Held eggs are the curse of the egg business in Alberta, and the sooner this is realized and remedied, the sooner will higher average prices prevail, with a correspondingly cheaper price to the consumer. The producer by holding his eggs destroys his chance of obtaining the highest price, as the eggs become stale and the consumer pays for them on the basis of their actual value. It is a most decided mistake for the producer to hold eggs, from the fact that eggs cannot be kept at their best even in cold storage where there are facilities for keeping them at the exact temperature most suitable.

Eggs deteriorate rapidly, and this, with their profound tendency to absorb undesirable taints and odors, makes it necessary that they be marketed promptly to insure freshness. Here, too, the country store keeper plays his part, as often the eggs are placed in a store room with coal oil, gasoline and other commodities with strong odors, and held until sufficient quantities are received to make a shipment.

Dealers are perhaps equally as great offenders. When eggs are plentiful and a surplus over immediate consumption is in sight, they reduce the price to the minimum, which encourages the producer to hold the eggs in anticipation of an advance in the near future. A stiffening of the price at this time, and throughout the hot weather months, would bring the eggs in fresh.

These are a few of the matters that affect not only the present, but the future of our poultry industry. Our aim should go beyond the supplying of a local or Provincial market. It is to be hoped that Canada will shortly produce a greater supply than is necessary for home consumption. If when such time arrives the poultry producers have conformed with the conditions suggested we will have a high class of poultry products that can be placed on the best foreign markets in competition with the world's supply.

Respectfully submitted,

A. W. FOLEY,
Poultry Superintendent.

REPORT OF THE RECORDER OF BRANDS

SIR.—I have the honor to submit the following report on the work of this branch of your Department for the year 1915:

During the year 1350 horses and 1899 cattle brands were allotted and recorded to their respective owners, while 743 transfers and 27 changes were duly recorded. Certified extracts of brands numbered 80, while searches and strays numbered 1292, being a total of 5391 transactions.

Compared with the previous year (1914) these figures show a decrease of 441 horse and 730 cattle brands, while extracts and strays give a falling off of 560. On the other hand, transfers have increased by 348 and changes by 9, or a total decrease of 1347 transactions during the year.

The following table shows the different transactions which have taken place since separate records for the Province have been kept:

Year	Horse	Cattle	Trans.	Changes	Searches & Extracts
1906	1361	1894	384	38	73
1907	1030	1230	430	28	73
1908	1103	1225	421	29	292
1909	1308	1326	420	33	783
1910	1891	1672	524	34	1218
1911	1538	1280	362	32	1408
1912	1545	1542	374	16	1655
1913	1471	2059	419	11	1795
1914	1764	2629	395	18	1932
1915	1350	1899	743	27	1372
Averages for 10 years	1436	1675	448	26	1060

From the above table it will be seen that the horse brands have fallen slightly below the average of the past ten years, while the cattle brands show an increase of 221 above the average. There is no doubt that the increase of the fee to \$3.00 per brand has deterred a few of the smaller stock owners from applying for brands, but the principal cause, after all, was the financial stringency among the farming community, owing to the crop failure of 1914.

It might be well to give in detail, to the public, through this report, the results and experiences of the effect of cancellation from an official standpoint, after the end of the first period.

In the early days of the ranching industry, brands were not legally recorded. A person merely went to the R.N.W.M.P. and said he was using a certain brand on his stock and asked them to note it, which was done, but when the brands became more numerous, the ranchers asked for some one to record brands, and Mr. C. E. D. Wood of Macleod did so, with the assistance of a committee, for a number of years, but there was no compulsory recording and a great number of the smaller men used brands and did not have them registered. The consequence was that a good deal of trouble was likely to take place from conflicting brands all over the western part of the Territory.



A MODERN ALBERTA RANCH—PROPERTY OF F. COLLICUT.

The Territorial Government was appealed to by the ranchers and in 1897 the first Brand law was passed. This Act required every one to apply to have his brands recorded, one brand being for horses and one for cattle, while a compulsory clause was enacted making it necessary to have brands recorded before they could be legally used on stock. At the end of 1898 it was found that 3228 brands, previously recorded by the N. W. M. P., and by Mr. Wood and others, had been re-allotted, while 2111 new cattle brands and 941 new horse brands were allotted during the year.

Since that date brands have been accumulating at a rapid rate, but no provision was introduced to get rid of unused brands. In 1906 a provision was made in the Act appointing a Board of Brand Commissioners of three stock owners, whose duties were to approve of a new series of cattle brands and to consider any matters brought to their attention by the Recorder of Brands. It was found difficult to arrange for a new series of brands, owing to the large number upon the books, and the attention of the Commissioners was called to this matter with the result that, after considerable deliberation, they agreed to recommend to the Department of Agriculture cancellation and renewal of all brands. The matter was taken up in 1912, with the result that legislation was introduced the following year giving effect to this recommendation.

The Cancellation and Renewal clauses of the Act were carried out for the first period during the year. All old brands allotted previous to the 31st of December, 1906, numbering about 23,000, were therefore cancelled, and I am pleased to say the number of brands renewed has exceeded the estimate made last year. It was expected that not more than 25% of the old brands would be renewed, but the figures give the number as 7805, which is about 30% of the brands recorded during the period in question. The method adopted by the Department was to

advertise the fact that all brands required to be renewed. This notice was inserted in all the local papers in the Province and in every farming paper read in the Province, while notices were also sent to all Brand Readers and Stock Inspectors. The Department also issued a circular letter to each individual owner enclosing a copy of his brands and position on stock with date of allotment, and giving a synopsis of the provisions of the Act referring to cancellation. During the latter part of the summer a registered letter was also sent to those who had not replied, reminding them of the fact that brands would be cancelled unless renewed before the 31st of December, and where letters had been returned by the Post Office Department saying "owner unknown," each file was looked up and if any later address could be found the circular was re-addressed.

In a good many cases it has been found that old brands have been used for years, in different positions on stock from that recorded in our registers. In a number of others the designs have been used in a wrong position, while during the period previous to 1897, when brands were being issued from two or three offices, situated in different parts of the Territories, it was natural to suppose that similar or conflicting brands would be issued, and as a matter of fact, the records did contain a number of such errors. Advantage has been taken of this opportunity, as far as possible, to have these errors corrected. Apparently a good deal of carelessness has been displayed by the owners, in not seeing that the brand is properly used on stock as shown on their certificates.

In cases where the owner may have died or left the country, the stock and brands have been sold to another person, and these new owners were, evidently, not aware of the necessity of having the same legally transferred and recorded in their names, and in consequence, cancellation notice did not reach these people, and in a great many of these cases the only notice they had was from the advertisement in some local paper. A reference to the transfer statistics for the year will clearly show this. In past years the average number of transfers recorded has been about 400 per annum, but this year no less than 743 have been recorded and of these 276 were recorded in the month of December alone. In cases where ownership had changed, renewal could not be granted until after the brand had been transferred and even in a number of cases the brands were renewed in the old owners' names, so as to have the brand renewed within the prescribed time and the new owners will later on have the brands properly transferred. Among these 276 transfers recorded during the month of December, it was found that in some cases these brands had been secured as far back as 15 years ago, while others were of a later date, but few under from 3 to 5 years. In a few cases, where the previous owner could not be found, it was necessary to have recourse to Subsection 2 of Section 4 of the Act and have the fact advertised in the local papers.

Outside the fact that cancellation and renewal of brands will, in the course of another year, clear our books of about 15,000 old and obsolete brands, a great amount of good will accrue to the farmers and ranchers, in that owners will now have their new addresses recorded, and where strays are reported, the notices sent to finders and owners will be much more likely to reach their destination. But, perhaps, the most good, after all, will result to the estates of families of men who for years have gone on using brands to which no claim, up to now, had been established.

Very few complaints have been received from private individuals regarding cancellation of brands. The Executive of the Western Stock Growers' Association, while holding their annual meeting in Medicine Hat, called at the office and after the matter of cancellation had been fully explained to them and discussed, they left, satisfied that the procedure taken was the only feasible way open to the Department, and at the general meeting held the next day no resolution was submitted on the subject. On the other hand, the Executive of the Horse Breeders' Association opposed cancellation, although admitting that the Brand Office should be placed on a self-supporting basis, but suggested that a tax placed on live stock would be more acceptable. This arrangement was not entertained by the Department, as no machinery existed for the collection of same, and undoubtedly a tax on stock would have caused a good deal of annoyance and worry to owners, besides causing considerable trouble in trying to levy such a tax. As the fees only amount to 50 cents per year per brand, no great hardship should be felt.

The number of letters received during the year was 14,723, while the number of documents dispatched was 52,298, a total of 67,021, being an increase of 45,988.

I append statement showing the transactions from 1898 to the 31st of December, 1915:

TRANSFERS.

Year	1899	.....	132
	1900	.....	165
	1901	.....	222
	1902	.....	265
	1903	.....	400
	1904	.....	402
	1905	(N. W. Territories)	299
		Alberta	120
	1906	.....	389
	1907	.....	430
	1908	.....	421
	1909	.....	430
	1910	.....	524
	1911	.....	362
	1912	.....	374
	1913	.....	419
	1914	.....	395
	1915	.....	743

CHANGES

Year	1899	.....	27
	1900	.....	27
	1901	.....	26
	1902	.....	43
	1903	.....	43
	1904	.....	32
	1905	(N. W. Territories)	7
		Alberta	38
	1906	.....	28
	1907	.....	29
	1908	.....	33
	1909	.....	34
	1910	.....	32
	1911	.....	16
	1912	.....	11
	1913	.....	18
	1914	.....	27
	1915	.....

SEARCHES AND EXTRACTS

Year	1899	.....	..
	1900	.....	35
	1901	.....	42
	1902	.....	100
	1903	.....	144
	1904	.....	124
	1905	(N. W. Territories)	81
		Alberta	13
	1906	.....	73
	1907	.....	73
	1908	(Including Strays)	292
	1909	.....	783
	1910	.....	1218
	1911	.....	1408
	1912	.....	1655
	1913	.....	1795
	1914	.....	1932
	1915	.....	1372
Number of brands re-alloted in 1898			3228
Number of brands renewed in 1915			7805

CATTLE BRANDS

Year	1898	.....	2111
	1899	.....	1466
	1900	.....	1508
	1901	.....	1689
	1902	.....	1934
	1903	.....	2390
	1904	.....	2034
	1905	(N. W. Territories)	1353
		Alberta	337
	1906	.....	1894
	1907	.....	1230
	1908	.....	1225
	1909	.....	1326
	1910	.....	1672
	1911	.....	1280
	1912	.....	1542
	1913	.....	2059
	1914	.....	2629
	1915	.....	1899

HORSE BRANDS

Year	1898	.....	941
	1899	.....	821
	1900	.....	886
	1901	.....	947
	1902	.....	1234
	1903	.....	1390
	1904	.....	1346
	1905	(N. W. Territories)	985
		Alberta	248
	1906	.....	1351
	1907	.....	1030
	1908	.....	1103
	1909	.....	1308
	1910	.....	1891
	1911	.....	1538
	1912	.....	1545
	1913	.....	1471
	1914	.....	1764
	1915	.....	1350

TOTAL TRANSACTIONS.

Year	1898	.....	6280
	1899	.....	2419
	1900	.....	2621
	1901	.....	2920
	1902	.....	3559
	1903	.....	4367
	1904	.....	3949
	1905	(N. W. Territories)	2750
		Alberta	725
	1906	.....	3756
	1907	.....	2791
	1908	.....	3070
	1909	.....	3880
	1910	.....	5339
	1911	.....	4620
	1912	.....	5132
	1913	.....	5755
	1914	.....	6738
	1915	.....	13196

Respectfully submitted,

JAS. WILSON,

Recorder of Brands.

REPORT OF CHIEF GAME AND FIRE GUARDIAN

SIR,—I have the honour to submit herewith the Tenth Annual Report in connection with the enforcement of the Game Act and Prairie Fires Ordinance for the year 1915.

I. PROTECTION OF GAME.

It is a satisfaction to be able to again report that in general, game is reasonably plentiful. From reports received it would seem that mountain sheep and mountain goat have increased. Elk, however, continue very scarce and it is doubtful if they are more than holding their own as to numbers. Deer, moose and caribou are still plentiful. Not as many were killed as during the open season of 1914, there being fewer hunters. Antelope, with the protection which has been given them by a close season, are increasing.

HUNTING OVER ENCLOSED LANDS.

Section 7 of the Game Act provides as follows:

"No person shall at any time hunt, trap, take, shoot at, wound or kill any bird or other animal mentioned in this Act, if it be upon or over any land enclosed by a fence of any kind or any land under cultivation or covered by buildings, nor shall he allow his dog or dogs used for hunting to enter upon such lands without having obtained the consent of the owner or occupant thereof."

With the increase of population in the Province, resulting in the building of towns and cities, the farmer residing within reach of such towns or cities and on whose land game is to be found, will in future be troubled with hunters trespassing on his land for the purpose of shooting wild ducks, geese, prairie chicken, etc. Occasionally the sportsman is gentleman enough to ask the farmer's permission before attempting to hunt or shoot over his land. Too often, however, no permission is asked and complaints have been received to the effect that after having been requested by the farmer to leave his land the sportsman refuses to do so and even abuses the farmer. There is no occasion for the sportsman to antagonize the farmer in this way, as there is plenty of open country in the Province within a short distance of our towns or cities to furnish all the hunting necessary. According to the provisions of Section 7 no person has any right to hunt over the enclosed lands of any other person without first obtaining permission. It is rare that any farmer will refuse to grant permission to do a little shooting on his land and where such permission is refused it is too often due to lack of courtesy on the part of the sportsman. The true sportsman and gentleman who wishes to do a little shooting is unfortunate in having to suffer on account of this.

The farmer is within his rights in refusing permission to hunt on his land. If he permits others to kill all his birds, it will be necessary, if he wishes to do a little hunting on his own account, to take a day off and travel for miles to obtain his quota of birds, whereas if he protects the birds from others, he will always have during the season at least a few birds that he may obtain in the early morning or late evening without neglecting his farm work. Where a farmer is surrounded by, or close to any wild, unenclosed land, he will find it to his advantage to hunt over such land and absolutely prohibit the use of fire arms on his own land. Birds soon realize when they are entirely protected. In this way the farmer

will have prairie chicken, partridge, wild ducks, etc., as the case may be, on his own land at all times (ducks of course excepted during the winter), and as partridge are largely insectivorous and prairie chicken also to some extent, these birds will reduce the ravages of grubs and insects and will likewise consume considerable weed seed. The partridge rarely feeds on grain, while the prairie chicken, at least for ten months in the year, feeds entirely upon grubs, berries, weed seeds and insects. Two months of the year is about the only time that it is possible for them to consume any grain from the stooks in the field, and in almost every case where these birds are found feeding in a field where grain is stooked it will be discovered that one or two of the covey are sitting on the stook as a look-out or sentinel while the balance are feeding off the stubble picking up shelled grain, weed seeds and insects. It is just possible that if none of these birds were killed they would prove to be much more valuable as insect destroyers than for food purposes. Owing to the great scarcity of these birds in the States to the south and also to the fact that the sale of their flesh is prohibited in most of the States and Provinces, the market value in the State of New York is approximately \$30.00 per dozen. Even at the price realized by the farmer for ordinary domestic fowl, it is to his advantage to protect the prairie chickens on his own land and encourage them to frequent his farm by scattering grain and by protecting them from their enemies and in this way establish a game farm. Where any person establishes a game farm the Lieutenant Governor in Council (as provided for by Section 6a of The Game Act), "may make regulations providing for the buying, selling and exporting of any game birds reared on game farms." Any advice which it is possible to give in connection with a venture of this kind will be furnished on application.



GAME EXHIBIT OF DEPARTMENT OF AGRICULTURE ON MIXED FARMING
SPECIAL.

It is important that the game birds should be preserved as in the event of their numbers becoming greatly reduced or exterminated, sportsmen will turn their attention to the small insectivorous birds. This will result in the final destruction of the farmer's best friend, as without the insectivorous birds the insect pests will increase to such an extent that farming operations will become unprofitable if not impossible.

GAME BIRDS.

With respect to game birds, there is a noticeable decrease. The scarcity of prairie chicken and partridge, however, cannot be attributed entirely to excessive killing by sportsmen. It is well known that these birds periodically migrate, or change their feeding ground. It will be necessary for us, however, to restrict the killing of these to as great an extent as possible, as they will not stand the excessive shooting to which some of the other birds have been subjected. Wild geese, swans and cranes are yearly becoming less numerous.

BIG GAME.

The season of 1915 was scarcely as favorable for big game hunters as that of 1914. A total of one thousand nine hundred and ninety-three big game animals were killed as compared with two thousand nine hundred and forty in 1914. A total of five thousand nine hundred and twenty-seven big game licenses were issued in 1915, being a difference of one thousand three hundred and seventy-four less than in 1914. Returns have been received under affidavit showing that the following number of animals were obtained by hunters under said licenses for the years 1907 to 1915 inclusive:

	1907	1908	1909	1910	1911	1912	1913	1914	1915
Antelope	49	45	89	126	101	105	119	..	..
Moose	14	37	86	184	305	425	865	1335	1116
Caribou . . . . .	..	..	5	8	30	40	56	78	34
Mountain Sheep . . . . .	..	..	40	54	49	90	65	78	110
Mountain Goat . . . . .	..	..	38	46	56	58	42	61	40
Elk . . . . .	..	..	..	7	..	..	..	..	1
Deer	59	125	299	540	619	768	908	1388	692

This does not show the total game killed, as practically no returns are available from the districts north of the 55th parallel.

FUR-BEARING ANIMALS.

Beaver.—It is a pleasure to be able to report an increase in the number of beaver. This animal is becoming somewhat of a nuisance in the southern part of the Province in the more settled districts, along the streams and in lakes where the majority of them burrow into the banks, and are commonly known as bank beaver. These animals are causing some of the farmers and ranchers more or less trouble, owing to the fact that they are cutting down brush and trees where every tree is appreciated in the prairie country. Requests have been received for permission to kill the animals which are causing trouble and undoubtedly some action will be necessary during the coming year. In other sections of the Province it has been found necessary to give permission for the opening of dams to prevent the flooding of farm lands.

Muskrat.—This little fur-bearing animal is increasing very rapidly and there are prospects for an excellent catch. The price for the pelts of these animals is gradually coming back to where it was in 1912 and 1913.

Foxes.—There is every prospect of a splendid catch of foxes this season and undoubtedly fair prices will be realized. The practice, however, of taking these animals from their dens in the spring of the year will ultimately reduce their numbers.

SALE OF GAME.

It is to be regretted that there was an increased number of ducks sold under Market Hunter's and Game Dealer's Licenses in 1915 as compared with 1914. It is noticeable, however, that there has been a decrease in the number of big game animals sold under licenses as compared with previous years.

The following table shows the number of game birds and big game animals marketed from 1913 to 1915 inclusive:

	MARKET HUNTERS			GAME DEALERS		
	1913	1914	1915	1913	1914	1915
Deer	7	14	5	6	18	6
Moose	43	34	17	23	39	20
Caribou	3	1	..	3	..	..
Geese	56	25	..	76	..	..
Swan . . . . .	..	..	..	1	..	..
Ducks	15339	3892	7394	16564	3497	5940
Mountain Sheep . . . . .	..	2	..	..	..	..

BRANDING GAME HEADS.

Section 11 of the Act requiring the branding of game heads before buying or selling, shows the following results:

	1907	1908	1909	1910	1911	1912	1913	1914	1915
Mountain Sheep	216	2	9	11	2	6	4	4	15
Mountain Goat	62	..	1	1	1	2	2	2	..
Elk	41	3	4	2	2	1	..	..	1
Moose	39	29	33	32	40	40	48	42	30
Caribou	16	6	6	2	3	3	2	5	1
Deer	142	15	26	26	40	40	24	32	15
Antelope	95	5	..	3	3	3	3	10	..

LICENSES AND PERMITS.

Owing to the continued financial stringency there has been a decrease in the number of game licenses sold as compared with 1914.

The following table shows the number of licenses and permits sold each year from 1907 to 1915 inclusive:

	1907	1908	1909	1910	1911	1912	1913	1914	1915
Gen. Game Licenses	4	7	17	24	24	28	32	25	32
Bird Game Licenses . . . . .	..	..	3	3	67	67	68	34	49
Resident's Big Game	446	529	1162	1997	813	1043	1378	1319	912
Res. Far. Big Game . . . . .	..	..	..	..	2118	2917	4260	5982	5015
Res. Bird Game . . . . .	..	..	..	..	7452	9519	13021	9674	7493
Guides' Licenses	6	3	7	8	13	21	24	14	16
Camp Helper's	1	1	1	4	5	5	5	1	6
Game Dealer's	12	23	39	30	16	26	23	39	29
Market Hunter's . . . . .	..	..	..	..	60	75	169	125	52
Permits to Export	15	17	19	35	24	27	38	120	121
Permits to Collect	6	6	16	23	7	7	2	561	5
Trappers' Licenses	6	4	1	10	14	26	46	..	2

CONVICTIONS AND FINES.

With fewer hunters the result has been fewer convictions. There was an increase in the number of convictions for taking females above the number in previous years, but the total number of convictions secured was much below 1914 and previous years. The different offences are classified as follows and cover the years 1908 to 1915 inclusive:

	1908	1909	1910	1911	1912	1913	1914	1915
For Hunting on Sunday . .	12	4	4	9	..	7	19	7
For Hunting in Close season	11	36	29	23	6	11	21	15
Buying and Selling Un- branded Heads	8	6	3	1	..	2	1	2
Hunting without a License	7	6	14	17	1	6	20	15
Taking Females . . . . .	..	..	..	4	..	2	5	10
Selling Without a License	7	7	..	1	2	..	..	6
Miscellaneous Offences . .	4	2	9	7	71	93	52	33

REVENUE FROM GAME.

With the continuation of the war and the enlistment of so many of our citizens who were hunters resulting in the sale of a much smaller number of licenses than in previous years, it is a pleasure to be able to report that there has been a surplus over and above the expenditure for the year 1915 of \$1,646.63, and a total surplus over and above expenditure for the years 1906 to 1915 inclusive of \$48,663.48.

The following table will show the number of different kinds of licenses and permits issued and the revenue derived therefrom, as well as the expenditure for game protection, for the years 1906 to 1915 inclusive:

REVENUE FROM GAME MONEY COLLECTED.

	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
General Game	\$	\$ 93.00	\$ 175.00	\$ 425.00	\$ 600.00	\$ 600.00	\$ 700.00	\$ 800.00	\$ 625.00	\$ 800.00
Bird Game . . . . .		.....	.....	45.00	45.00	335.00	335.00	340.00	170.00	245.00
Trapper's		40.00	40.00	10.00	100.00	140.00	260.00	460.00	.....	50.00
Res. Big Game		115.00	1,322.50	2,905.00	4,992.50	2,032.50	2,607.50	3,445.00	3,297.50	2,280.00
Res. Farmer's B.G . . . . .		.....	.....	.....	.....	2,118.00	2,917.00	4,260.00	5,982.00	5,015.00
Res. Bird Game . . . . .		.....	.....	.....	.....	9,315.00	11,898.00	16,276.25	21,766.50	16,859.25
Guide's		30.00	15.00	35.00	40.00	65.00	105.00	120.00	70.00	40.00
Camp Helper's		2.50	2.50	2.50	10.00	25.00	25.00	25.00	5.00	15.00
Game Dealer's		120.00	230.00	390.00	300.00	160.00	260.00	230.00	390.00	290.00
Market Hunter's . . . . .		.....	.....	.....	.....	300.00	375.00	845.00	625.00	260.00
Permits to Export		171.00	92.00	50.00	76.00	41.00	65.00	78.50	13,875.00	3,766.00
Permits to Collect		65.00	50.00	55.00	45.00	35.00	35.00	10.00	2,905.00	25.00
Branding		2,158.00	240.00	314.00	295.00	323.00	246.00	328.00	343.00	265.00
Confiscated Game . . . . .		.....	.....	104.00	108.75	30.00	45.00	20.00	2,920.66	7.48
Fines		154.00	337.50	447.50	328.00	700.00	861.00	1,667.53	1,759.93	1,417.78
Total Revenue	\$ 145.00	\$ 3,948.50	\$ 2,504.50	\$ 4,793.50	\$ 6,940.25	\$16,219.50	\$20,734.50	\$28,905.28	\$54,628.59	\$31,335.49
Total Expenditure	\$1,929.69	\$ 2,216.62	\$ 4,323.60	\$ 5,579.90	\$ 4,766.20	\$ 8,335.00	\$14,042.17	\$19,164.51	\$30,845.08	\$29,688.86
Surplus . . . . .	.....	\$ 1,731.88	.....	.....	\$ 2,174.05	\$ 7,884.50	\$ 6,692.33	\$ 9,740.77	\$23,783.51	\$ 1,646.63
Deficit	\$1,784.69	.....	\$ 1,819.10	\$ 786.40	.....	.....	.....	.....	.....	.....

Surplus over and above expenditure for year 1906 to 1915, \$48, \$48,663.48.

The following licenses were issued to Treaty Indians free of charge on the strength of a certificate from their Agent, as provided for by Section 19 (c) of The Game Act:

Resident Farmer's Big Game Licenses 250

DEMONSTRATION TRAIN.

The car containing natural history specimens received great attention at all points visited. On some occasions the car was not large enough to accommodate the crowd. Copies of The Game Act and Game Regulations were distributed to interested persons and at times it was difficult to clear the car to permit the train to leave on schedule time. Inquiries have been received from different points asking if the demonstration train will be repeated in 1916. The exhibit was a surprise to visitors to the train. Many asked if the animals and birds represented in the car were all found in the Province of Alberta. It was regrettable that the specimens were crowded into too small a space for the best results.

FUR FARMS AND BREEDERS OF FOXES.

Ashley, Fred. B.	Dusseldorf
Ashley, W. N.	Kinuso
Ashley, G. B.	Dusseldorf
Ashley, J. & B.	Holmes Crossing
Agard, J. B.	Grouard
Antisdale, Frank	Calling River
Brodrick, W. W.	Wabasca
Blakely, J. A.	Holmes Crossing
Cameron, Archie.	New Sarepta
Carrel, M.	Fribourg
Cartwright, John L.	Holmes Crossing
Finstad, Olaf	Holmes Crossing
Forman, S. E.	Vegreville
Ferguson, William A.	South Edmonton
Filteau, Miss L.	Grouard
Goodwin, Archie.	Tomato Creek
Grove, D. H.	Bituma
Holfinger, Thos.	Mirror Landing
Haws, Wm.	Cardston
Hardy & Lindquist	Dusseldorf
Lee, F. M.	Battle Lake
Ladouceur, August	Lac La Biche
Lovatt, Jesse	Island Lake
Lancour, P.	Donatville
LeToquerux, P.	Peace River Crossing
L'Hirondelle, Jos.	Prairie Lake
L'Hirondelle, August	Lac La Biche
L'Hirondelle Bros.	Whitefish Lake
Ladouceur, Jos.	Lac La Biche
Holtzman, Oscar	Neerlandia
Johnston, Alf.	Kinuso
Mentz, Carl	Gainford
McKelvey, Samuel	Sawdy
McGraw, Geo. W.	South Edmonton
MacKenzie, K. C.	Grouard
Pioneer Silver & Black Fox Co.	Lacombe
Smith, D.	Seba
Sharon, J. O.	Grosmont
Swanson, Robert	Mirror
Smith, Robert	Edmonton
Vinson, H.	Cardston
Wade, A. G.	Dusseldorf
Williams, Thomas	Dusseldorf
Weeks, G. G.	Pakan

Reports from fur farmers show that there are 128 silver foxes, 272 cross foxes and 57 red foxes on the fur farms in the Province. During the year 1915 there were 104 silver foxes and 133 cross foxes exported.

GAME GUARDIANS BY CONSTITUENCIES.

GAME GUARDIAN	ADDRESS
<i>Acadia.</i>	
Rae, J. D.	Chinook
Brodie, Neil	Clemens
Collins, D. S.	Youngstown
Desso, Jno. Chas.	Oyen
Stauffer, Jos. W.	Alsask, Sask.
Robertson, Jno. C.	Collholme
Louis de Delly, H.	Mooswa
Gardiner, Robert	Seal
Blodgett, M. A.	Empress
Johnson, Edward S.	Chinook
Waterhouse, J. A.	Cereal
McGregor, James A.	Sibbald
Dobson, Robert	Chinook
<i>Alexandra.</i>	
Moore, D. H.	Islay
Hassal, H.	Lloydminster
Maddex, J.P., Wm.	Greenlawn
Gilchrist, R. H.	Lloydminster
Phillips, Geo. W.	Kitscoty
McEachern, Neil	Islay
<i>Athabasca.</i>	
Biggs, Wm.	Fort McMurray
Loutit, Peter	Fort Chipewyan
Jones, David S.	Paxson
Bowman, C. B.	Athabasca
De Forest Clyne	Peace River Crossing
Vincent, J. H.	Athabasca
Kramer, James	Calling River, via Athabasca
<i>Beaver River.</i>	
Des Pius, Louis Nap	Brosseau
Storach, Geo.	Abilene
Minnie, Peter	Lac La Biche
Guertin, Madam Kate	Therien
Billos, Joseph	Lac La Biche
Probert, E. H.	Denisville
Fouty, W. A.	Boyne Lake
<i>Bow Valley.</i>	
Wheatly, Fred.	Tilley
Martin, Jr., Dan.	Rosebud Creek
Bunny, B. H.	Bassano
Slude, David	Dorothy
Hames, W. A. W.	Bassano
Binns, J. H.	Brooks
Bond, Geo. B. R.	Bassano
Ross, R. C.	Cluny
Rosher, Douglas	Southesk
Palmer, F. J.	Crowfoot
Flannagen, Wallace	Bassano
Shaw, D. H.	Major
McBeath, J. P.	Dorothy
Smith, Harvey	Bassano
McHugh, Edgar	Foremost
Chudleigh, A. P.	Brooks
Cliffgard, A. A.	Hussar

GAME GUARDIAN

ADDRESS

Calgary.

McDougall, D.	Calgary, 517 4th Ave. W.
Beveridge, S. E.	Calgary, Box 1650
Wheeler, A. O.	Calgary
Brewster, J. I.	Calgary, 1202 Boulevard N.W.
Martin, Alex.	Calgary, 231 8th Ave. E.
Kennerly, L. H.	Calgary, Box 1234
Robinson, R. G.	Calgary, Box 21
Aylward, J. B.	Calgary, Hillhurst
Dippie, G. F.	Calgary, 218 8th Ave. W.
McKay, W. G.	Calgary, 218 8th Ave. W.
Sanders, W. S.	Calgary, Box 207
Forbes, H. D.	Simons Valley
McLaren, Ben.	Calgary
Clifford, Capt. E. S.	Calgary, 1318 8th Ave. W.
Foley, E. G.	Calgary, 231 8th Ave. W.
Williams, Geo. E.	Calgary, 1104 Boulevard N.W.
Illsey, W.	Calgary, Ashdown Hardware Co
Venables, C.	Calgary, 1208 9th Ave. E.
Rea, Dr. Arnold.	Calgary, Box 334
Auger, A. R.	Calgary, Comer Hardware Co
Clements, J. S.	Calgary, Calgary Novelty Works
Gibson, Thos.	Calgary
McCarthy, Chas. E.	Shepard
Martin, Fred R.	Calgary, 231 8th Ave. E.
Rutherford, J. J.	Calgary, 1226 9th Ave. E.
Sanders, Will.	Calgary, 1226 9th Ave. E.
Bredt, P. M.	Calgary
Chesney, Geo.	Calgary, 237 16th Ave. N.W.
Critchlow, H.	Paddle River
Dagg, E. A.	Calgary, 326 8th Ave. W.
Little, R. A. J.	Calgary, Box 288
Beyers, R. F.	Calgary, 1309 1st Street W
Mapson, F. M.	Calgary, Box 592
Thurston, James R.	Calgary, Calgary Museum
Ross, A. C.	Calgary, 608 5th Ave. W.

Camrose.

Fleming, A. W.	Ohaton
Mickleburgh, A.	Spilsted
Wilson, O. T.	Camrose
Horn, A. D.	Ferintosh
Kezar, C. F.	Ferintosh
Battram, T. C.	New Sarepta
Kuhnke, F.	Ferintosh
Griffis, H. H.	Daysland
Bailey, C. Stanley	Camrose
Neveu, Jas.	New Norway
Neveu, Joseph	New Norway
Yates, William	Duhamel
Wendt, W. F.	Edberg
Whitby, A. J.	Bashaw
Engen, K. O.	Bawlf
Murphy, Cullen B.	Donalda
Bye, Birger	Meeting Creek
Walker, C. W.	Round Hill
Reid, Wm.	Dorenee
Toreson, O. H.	Bittern Lake
Swenerton, Ben. R.	New Norway

Cardston.

Brown, Jno. Geo.	Waterton Mill
Tolley, Wm. F.	Mountain View
Heathershaw, Geo.	Magrath
Danielson, Carl	Cardston

GAME GUARDIAN

ADDRESS

Cardston—Continued.

Lamb, Jno. R.	Magrath
Phipps, H. C.	Cardston
Grow, Harry	Hill Spring
Ferguson, Claud	Cardston

Glaresholm.

Porter, Geo. E.	Mayercroft
Lyndon, Wm.	Lyndon
Smith, Percy A.	Granum
Gardner, C. W. E.	Olson Creek
Maltby, Truman	Meadow Creek
Blair, James	Granum
Moore, James H.	Mayercroft

Clearwater.

Lee, Ollie T.	Holmes Crossing
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Cochrane.

Abell, E. H.	Cochrane
Fraser, J. A. W.	Jumping Pond
Grayson, Chas.	Cochrane
Johnston, Geo. W.	Cochrane
McLeod, Geo.	Dog Pound
Skinner, D. W.	Lochend
Thompson, E. V.	Dog Pound
Edwards, Cecil	Glenbow
Davie, Jno. S.	Crossfield
Butler, Robt.	Cochrane
Farr, Leslie	Airdrie
Davey, Wm. C.	Airdrie
McDougall, Jno. B.	Morley
Reid, Geo. A.	Bottrel
Willis, Jos.	Cochrane
Hultgren, Chas.	Crossfield
Alfrey, J. E.	Big Prairie
Robinson, J.	Pirmez Creek
Fuller, G. G.	Bottrel
Cohen, Cecil M.	Pirmez Creek
Gardner, Clement I.	Pirmez Creek
Hyde, L. R.	Glenbow
Watters, Wm.	Airdrie
Drake, C. F. R.	Glenbow
Martin, S. B.	Glenbow
Baptie, Archibald	Cochrane
Bassett, Percy	Cochrane
de la Vergne, C. R.	Glenbow

Coronation.

Mallott, L. A.	Coronation
Helmholt, Thos. E.	Coronation
Murphy, H. A.	Consort
Garbutt, Newman F.	Consort
Johnson, Oscar H.	Ensleigh
Bedleman, H. L.	Veteran
Parker, Earl	Coronation
Wilson, Bert Lea	Monitor
Beebe, L. R.	Monitor
Scott, John	Castor
Enders, Martin J.	Empress
Tye, Frank C.	New Brigden
Dunn, Lawrence P.	Loyalist
Dillion, F. M.	Lorraine
Cope, Geo. Wm.	Poplar Vale, via Loverna

GAME GUARDIAN

ADDRESS

Didsbury.

McLeod, Jno.	Grainger Station
McIntyre, Wm.	Didsbury
Hansen, Gordon	Acme
Shantz, Allan R.	Carstairs
Walker, T. A.	Carbon
Bannerman, W.	Acme
Peterson, C. L.	Didsbury
Robertson, Stanley	Three Hills

Edmonton.

Blackburn, B. F.	Edmonton, 307 C.P.R. Bldg.
Bulmer, Geo.	Edmonton, 624 14th St.
Rudd, H. E.	Edmonton, Kirkness St.
Chambers, P. A.	Edmonton, 777 1st St.
Steckle, Norman	Edmonton
Sutherland, Geo.	Edmonton, 1346 Victoria Ave.
Campbell, S. F.	Edmonton, 790 1st St.
Burnham, A. A.	Edmonton, 184 Cavan St.
McEachern, Donald	Edmonton, 276 York St.
Smith, Robt.	Edmonton, 19 Quebec Bank Bldg
Morris, H. G.	Edmonton, Edmonton Locators
Umbach, Jno. H.	Edmonton, Box 291
Jellett, J. St George	Edmonton, Tegler Block
McKenzie, K. B.	Edmonton, Ross Bros.
Thom, J. M.	Edmonton, Tegler Block
Hurdle, J. E.	Edmonton, Box 789
Hunter, J Munro	Edmonton, 233 Jasper E.
McFayden, A. C.	Edmonton, Box 1588
Cox, R. H.	Edmonton, Howard Ave.
Riggs, W. A.	Edmonton
Simpson, E. H.	Edmonton, 233 Jasper E.
Bell, Sydney Wm	Edmonton Connaught Driveway
Stanford, Chas. R.	Edmonton, Northern Club
Bernard, P. F.	Edmonton
Chown, Russell C.	Edmonton, 341 Jasper E.
Clegg, Edward	Edmonton, 333 Jasper E.
Dougherty, B. V.	Edmonton, 1418 Alberta Ave.
Scott, Geo.	Edmonton, Northern Hardware
McClary, P. F.	Edmonton, McClary's Hardware
Carmichael, A. C.	Edmonton, 651 5th St.
Adams, Alex.	Edmonton
Chamberlin, Jerry	Edmonton, 204 Lee Street
Chamberlin, O. W.	Edmonton, 324 Norwood Boulevard
Cowderoy, G. M.	Edmonton, Northern Club.
Osborne, Frank A.	Edmonton, 24th Street
McMann, T. J.	Edmonton, 773 12th Street
Chown, Leroy J.	Edmonton, 341 Jasper E.
McGill, Hugh	Edmonton, 612 2nd Street
Flowers, Harry	Edmonton, Sommerville Hardware
Marchall, W.	North Edmonton
Stevenson, W. V.	North Edmonton
Le Cerf, Jules	Edmonton
Barrie, John A.	Edmonton, North End Realty Co
McLaren, Robt. J.	Edmonton, McLaren Hardware
Meredith, Geo.	Edmonton, 44 Rice Street
Freeman, C.	Edmonton, Northern Hardware
Gosnell, Van.	Edmonton
Bolander, Edwin I.	Calder
Newton, Hayden	Edmonton
Wood, W. R.	Edmonton, 612 1st Street
Russel, Jas. A.	South Edmonton
Stewart, Homer	Beverly
Pinfold, Carle Thomas	Edmonton, York and McNamara

GAME GUARDIAN

ADDRESS

Edmonton—Continued.

Swaishland, Geo. W.	Edmonton, Molsons Bank
Welsh, Robert J.	Edmonton, 10303 1st Street
Isaac, Edgar A.	Edmonton, Arlington Apts.
Dodman, Arthur E.	Edmonton, Hudson's Bay Co

Edson.

Steyes, F. de	Pacific Pass Mines
Zorhab, Leslie	Hinton
Cline, Samuel	Tollerton
Reade, Wm.	Carrot Creek
Thompson, John E.	Edson
Hope, Wm.	Edson
Harris, L. H.	Mountain Park
Thomson, W. E.	Hinton
Ames, F. T.	Coalspur
Otto, Closson	Jasper

Gleichen.

Clark, Jr., John	Gleichen
Brereton, David	Gleichen
Brown, W. W.	Strathmore
Robson, R. B.	Strathmore
Lincoln, Arthur G.	Langdon
Brown, Mike	Namaka
Malyea, Jas. H.	Beiseker
Moe, Enoch	Langdon
Berry, Geo. T.	Strathmore
Rehder, Geo.	Dalroy
Lawrence, J. L.	Standard
Griesbach, Emil	Griesbach
Wolliams, E. J.	Nose Creek
Oswald, Joseph	Irricana
McComb, J.	Carseland
Jackson, Wm. D.	Queenstown
Watts, E. C.	Namaka
Mercer, James W.	Ardenode

Grouard.

Tomkins, Peter	Grouard
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Hand Hills.

McKay, D. J.	Munson
Moyer, Jno. H.	Munson
Russel, Jas.	Munson
Norton-Taylor, S.	Munson
Cope, G. R.	Hanna
Foss, M. F.	Stoppington
Riddell, R. B.	Glencurrie
Gatjens, W. G.	Hutton
Blain, E. A.	Drumheller
Backues, S. O.	Craigmyle
Skinner, Hector	Munson
Malcolm, W. H. G.	Delta
Roper, George F.	Rosedale
Richardson, Wallace F.	Rowley

High River.

Dunlop, Wm. A.	High River
Gervais, Romain	High River
Riddle, D. M.	Baronet
Kuck, Fred.	Pekisko

GAME GUARDIAN

ADDRESS

High River—Continued.

Baker, E. R.	Pekisko
Jones, Herbert	Tongue Creek
Thomas, P. G.	High River
Riddell, Alex.	Loch Sloy
Burke, T. C.	Pekisko
Thomas, William	Brant
Hollmotz, A. J.	Cayley
McCullough, E. B.	Arrowwood
Thorne, W. B.	Aldersyde
Cumming, George	High River
Eures, John	Blackie

Innisfail.

Faris, Jr. Jas	Trenville
Milligan, R.	Pine Lake
Mustard, H. M.	Markerville
Hunford, B.	Markerville
Robinson, Edmund	Innisfail
Robinson, J. K.	Innisfail
Scott, W. L.	Markerville
Major, Donald	Stauffer
Thompson, Frank J.	Innisfail
Tatham, Cyril H.	Stauffer
Bower, Len D.	Caroline
Taylor, A. O.	Stauffer
Lewis, Geo.	Caroline
Cronshaw, Alfred E.	Pine Lake
Pugh, A. T.	Kevisville
Thorborn, Capt. W.	Elnora
Brown, J. H.	Penhold
Bilton, Wm. S.	Knee Hill Valley
Pollard, Clifford	Caroline
Cameron, Donald	Lakeview
Lewis, Thomas	Lousana
McDougall, K. D.	Penhold
Kolding, N. H.	Kevisville

Lac Ste. Anne.

White, Hy.	Wabamun
Bray, Wm. B.	Greencourt
Romeo, Jos. R.	Peavine
Braithwaite, Geo.	Roxboro
Stansell, S. S.	Manley
Webster, Wm.	Chip Lake
Illott, Robt.	Chip Lake
Bennett, Thos.	Padstow
Smith, Donald	Fallis
Harrison, G. R.	Gainford
Munroe, S. S.	Entwistle
Marios, Arthur	Greencourt
Fraser, Norman L.	Mussel
Coates, John H.	Padstow
Kleophas, Carl	Park Court
Matthews, M. H.	Matthews Crossing
Mells, D. L.	Roydale
Ritchie, Geo. G.	Whitecourt

Lacombe.

Boyd, A. J.	Lacombe
Capron, Jos.	Blackfalds
Pinnell, Chas. H.	Alix
Grose, J. C.	Clive

GAME GUARDIAN ADDRESS

Lacombe—Continued.

Smith, Wm.	Bentley
Stephens, Fred.	Lacombe
Triplett, J. E.	Forshee
Waghorn, W.	Blackfalds
Stelfox, Hy.	Morningside
Kent, Jas. P.	Lacombe
Huepplehenser, O. W.	Lockart
Parlby, Walter	Alix
Evans, H. J. Angell	Lacombe
Miller, Leroy B.	Lacombe
Reid, Wm.	Lacombe
De Groff, G. A.	Bentley
Murdoch, J. D.	Mirror
McPherson, Jas. P.	Wiesville
Minkler, Lewis P.	Mirror
Marshall, Uriah W.	Mirror
Pettet, W. L.	Alix
Hamilton, Roland Hill	Alix
Allison, F. E.	Clive
Austin, B. F.	Carlos
McDonald, Clinton	Leafland

Lethbridge.

Olander, C. G.	Lethbridge
McDonald, Dougall E.	Lethbridge
Smith, C. F.	Lethbridge
Hick, Fred.	Lethbridge
McNichol, Jno.	Lethbridge
Gray, Chas. W.	Lethbridge
Bamling, John	Diamond City

Leduc.

Young, R. C.	Millet
Blades, R. C.	Leduc
Brissard, Jos.	Leduc
O'Mara, E.	O'Mara
Hudson, Wm.	Buford
Ohrn, Carl Herbert	Ohrnville
Barker, R. C.	Leduc
Piggott, Ben.	Calmar
Vanalstyne, J. H.	Telfordville
Postle, Leonard	Calmar
Allan, Harry	Stones Corners
Oswald, Jacob	Leduc
Menard, Alex.	Millet
Mally, Walter	Stones Corners
Kaulitzk, Martin	Looma Vista
Betts, Alfred W.	Millet
Hannem, Julius	Lindale
Kaduck, John	Leduc
Keith, E. H.	Millet
Gaetz, R. F. G.	Leduc

Little Bow.

Miller, J. W.	Carmangay
Carmichael, W. A.	Champion
Grant, E. A.	Barons

Medicine Hat.

Bray, J. H. G.	Medicine Hat
Murray, Geo.	Seven Persons
Rutherford, R.	Irvine

GAME GUARDIAN

ADDRESS

Medicine Hat—Continued.

Armstrong, Peter T.	Elkwater
Robinson, Jas.	Josephburg
Murray, J. B.	Seven Persons
Hassard, H.	Medicine Hat
Newby, H. S.	Irvine
Clarke, Maurice T.	Eagle Butte
Cavan, Hy.	Dunmore
Lamarsh, Peter	Winnifred
Schroder, M. S.	Walsh
Markwick, Geo. H.	Medicine Hat
Rushmer, Wm.	Medicine Hat
McLean, Neil	Manyberries
Berry, Stephen	Manyberries
Galloway, G. P.	Rosebeg
Cameron, Donald	Rosebeg
Fuller, W. W.	Whitla
Young, Geo. A.	Endon
Evenson, John J.	Comrey
Foster, Henry H.	Seven Persons
Hellawell, J. H.	Thelma
Hargrave, T. A.	Walsh
Taylor, Austin, L.	Altorado
Stimson, Percy W.	Ranchville
Duncan, T. L.	Onefour
Weeks, Walter F.	Fourways
McAskile, Colin	Seven Persons
Weir, F. A.	Little Plume
Thompson, M. S.	Pendant d'Oreille
McHugh, Edgar	Foremost

Macleod.

Cochlin, Jno.	Macleod
Roberts, P. J.	Macleod
NcNab, R. B.	Macleod
Stockton, J. H.	Macleod
Grant, J. A.	Macleod
Kortright, P. F.	Macleod
Revell, Geo. G.	Macleod
Connolly, Wm. C.	Macleod
Grady, A. F.	Macleod

Nanton.

Hughes, J. M.	Nanton
Ditto, Fred S.	Staveley
Legler, George	Nanton

Okotoks.

Brown, S. J.	Aldersyde
May, E. G.	Elbow River, R.R. No. 2.
Grant, John A.	Black Diamond
Spooner, J. A.	Millarville
Shaw, H. K.	Midnapore
Thompson, Geo.	Okotoks
Allen, L.	Okotoks
Murray, P. H.	De Winton
Young, Edwin H.	De Winton
Phillips, Walter	Kew
Senior, Fred	Kew
McAloney, Robt. F.	Okotoks
Standish, Chris. G.	Priddis
King, W. H.	Millarville
Schroeder, F.	Midnapore
Patton, Dan.	Midnapore

GAME GUARDIAN

ADDRESS

Olds.

Byron, Thos.	Eagle Hill
Distman, A. C.	Trochu Valley
Thompson, Colin	Red Lodge
Thompson, Evan	Red Lodge
Grant, J. F.	Olds
McKim, H. H.	Bowden
Barathy, Sidney de	Trochu
Shenfield, E. W.	Bowden
Durrant, Harry	Trochu
Hoare, G. R.	Bowden
Sackrider, S. F.	Bearberry
Bird, Frederick	Sundre
Niddrie, F. J.	Mound
McClellan, Jno. C.	Olds
Logan, Adam O.	Olds
Landon, Frank J.	Olds
McLauchlin, Alix	Trochu

Peace River.

Carter, J. R.	Saskatoon Lake, Grande Prairie
Gaudet, Jno. P.	Peace River Crossing
Monkman, Alex.	Grande Prairie
McDonald, Duncan	Dunvegan
Hughes, James A.	Grande Prairie

Pembina.

Cosens, F.	Sion
Lucas, Arthur	Clyde
Edgson, Jno. A.	Westlock
Maier, Wm. G.	Sunniebend
Barton, Robt.	Mossid
McGregor, J.	Eastburg
Stanley, E.	Westlock
Munsterman, H.	Dusseldorf
Guest, Gordon	Westlock
Critchlow, H.	Paddle River
Cruikshank, D.	Dunstable
Hodgkinson, William E.	Sion
McLaren, J. C.	Pickardville
Maier, Gottieb	Sunniebend
Brant, Peter F.	Lawton

Pincher Creek.

Willock, D. F.	Pincher Creek
Hughson, A.	Lundbreck
Riviere, H.	Pincher Creek
Robinson, W. C.	Cowley
Hughes, Jas. H.	Cowley
Littleton, Robt.	Cowley
McRoberts, W. J. E.	Pincher Creek

Ponoka.

Craig, B. F.	Bluff Centre
Everts, Jas.	Winterburg
Fleming, Louis	Ponoka
Fraser, A. B.	Ponoka
Webster, O. L.	Ponoka
Aldridge, C. D.	Wittenburg
Beeley, J. H.	Rimbey
Lee, F. J.	Rimbey
Budd, Geo. H.	Iola

GAME GUARDIAN

ADDRESS

Redcliff.

Bishop, Jesse	Redcliff
Stevens, H. J.	Carlstadt
Whiffin, Hartley A.	Suffield
Schuler, N. B.	Schuler
Cutt, J. B.	Redcliff
McEwen, W. C.	Redcliff
Gunderson, Geo.	Carlstadt
McDiarmid, F. R.	Carlstadt
Enders, Martin J.	Empress
Blodgett, M. A.	Empress
Foster, Abram F.	Tide Lake
Hatcher, William H.	Redcliff
Doyle, D.	Suffield

Red Deer.

Mellor, C. F.	Pitcox
Wallace, J.	Red Deer
Thorkman, Thos.	Eckville
Rutter, C. J.	Sylvan Lake
Fullerton, Jas.	Nordeg
Muir, B. A.	Prairie Grange
Hart, Thos.	Leslieville
Killick, J. H.	Rocky Mountain House
McDonald, J. M.	Evarts
Hogg, E. S.	Red Deer
Pickering, W.	Sylvan Lake
Parsons, Arthur	Vetchland
O'Connor, Gerald	Sylvan Lake
Eckford, Arthur, E. T.	Eckville

Ribstone.

Lamont, Robt. Hy.	Greengale
Matusch, A. B.	Amisk
Evans, Thos. Jas.	Cadogan
Farquharson, Alex.	Eye Hill
Roderick, Jno. Jas.	Cairns
Gerrie, Wm.	Metiskow
Beesley, C. W.	Provost
Whitlock, Jno.	Puffer
Nyburg, Karl	Metiskow
Karran, W. B.	Hardisty
Bogg, A. A.	Hughenden
Schneider, F. C.	Rosenheim
Girvin, John	Hardisty
Rysdale, Geo. A.	Hardisty
Kirkwood, Alfred R.	Hardisty
McCartney, Jack	Cadogan
Lawley, Arthur	Hughenden
Paulson, Theodore	Cadogan
Lees, James	Amisk

Rocky Mountain.

Robertson, Robert	Banff
Sibbald, H. E.	Banff
Livingstone, G.	Bragg Creek
Baptie, Adam M.	Exshaw
Hogarth, Jno.	Exshaw
McEwen, B. P.	Coleman
McDonald, E. C.	Bellevue
Chester, J. C.	Burns
Simpson, William	Frank
Cameron, E. P.	Beaver Mines

GAME GUARDIAN

ADDRESS

Sedgewick.

Lyall, Chas. F.	Strome
McDonald, J. S.	Sedgewick
De Pass, F.	Strome
Robson, T. S.	Killam
Ward, M. H.	Sedgewick
Miller, E.	Strome
Gray, Hugh L.	Lougheed
Lund, Ole O.	Viking
Overbo, Edward	Kinsella
Aylesworth, Peter	Killam
Jesson, Richard	Lougheed
Ruse, Arthur	Strome

Stettler.

Dennis, Walter	Big Valley
Gray, W. B.	Stettler
Ducloy, Chas. E.	Eckville, Box 8.
Barrett, E. W.	Kanata
Harrington, W. W.	Ewing
Longson, H.	Stettler
Berry, Edgar	Halkirk
Gibbons, Oliver	Erskine
Hoe, Robt.	Stettler
Webb, Geo. S.	Erskine
Allison, Edwin	Nevis
Runn, J. B.	Garden Plains
Matthias, E. H.	Castor
McGregor, Chas. S.	Endiang
Addison, A.	Castor
Cloutman, J. C.	Gadsby
Gardner, E. M.	Gopher Head
Castelein, A.	Monval
Six, Albert E.	Stettler
Bruce, A. W.	Botha
Morton, C. B.	Erskine
Morton, Ross	Big Valley

Stony Plain.

Fleming, E.	Woodbend
Hoffman, M. L.	Tomahawk
Hagen, S. C.	Winterburn
Bennett, Jno.	Keephills
Currie, Chas.	Graminia
Kuhl, Hy.	Golden Spike
MacGillycuddy, V. J.	Stony Plain
Pinchbeck, E.	Winterburn
Jenkins, E. J.	Tomahawk
McKinley, Murd.	Stony Plain
Jasperson, Andrew	Stony Plain
Sims, Elmer	Inga
Umbach, Israel	Stony Plain
Eatock, Jas.	Inga
Bates, Arthur E.	Stony Plain
Mills, Fred. S.	Heatherdown
Ferguson, James	Blacktail
Metcalf Russel	Spruce Grove
Ashley, W. H.	Stony Plain
Faulks, P.	Duffield
Shaw, Giles H.	Mewassin

GAME GUARDIAN

ADDRESS

Strathcona.

Ellett, F. S.	Sandy Lake, Strathcona
Inkster, Jas.	Strathcona
Lackey, Hamilton	Ardrossan
Helpenstine, Chas.	Deville
McLaggan, J. W.	Strathcona
Tipton, J. W.	Strathcona
Dunn, J. A.	Strathcona
Stephens, W. H.	Strathcona, 516 1st Ave. N.E.
Shields, W. K.	Strathcona
Murphy, C. H.	Hercules
Wilkinson, W. F.	Clover Bar
Cleland, J. G.	Ardrossan
Bremner, J. C. C.	Bremner
Wright, O. S.	Strathcona
Stewart, R. H.	Strathcona
Stout, Clarence H.	Strathcona
Sievwright, George W.	Strathcona
Grabau, Chas. H.	Strathcona
Baines, E. T.	Strathcona
Kinnear, John M.	Strathcona
Tipton, Thompson R.	Strathcona
McCoombs, T. J.	Strathcona
Latimer, Albert E.	Strathcona
Otto, Albert H.	Deer Mound
Hulbert, Havelock D.	Strathcona
Russell, James A.	Strathcona

Sturgeon.

June, Robt.	Namoo
Milligan, Jno.	New Lunnnon
Florence, A. S.	Battenburg
Henry, F. J.	Pine Creek
Wyatt, Ernest J.	Nestow
Veenhuis, Jos.	Redwater
Lovatt, Jesse	Halfway Lake
Crackles, William	Stocks
Cherington, Geo.	Radway Centre
Brown, W. F.	Fedorah
Shears, Frank	Bruderheim
Lewis, T.	Perryvale
Murphy, E. J.	Crippsdale

St. Albert.

Cooper, W. H.	St. Albert
Kelly, Patrick	St. Albert
Verstracte, Camille	Villeneuve
Gagnon, Sam	St. Albert
Chave, Jules	St. Albert
Jenkins, G. H.	Seymour
Poirier, Edmund	St. Albert
Cunningham, Toby D.	Egg Lake
Reid, Peter D.	Fairydell
Gaudett, Philiias	Morinville
Saunders, Thos. H.	St. Albert
French, G. B.	Cardiff

St. Paul.

Ferguson, W. R.	Ferguson Flats
Limoges, J. H.	Beaver Crossing
Amsden, A. C. M.	Elk Point
Bowtell, Fred.	Frog Lake

GAME GUARDIAN

ADDRESS

St. Paul—Continued.

Guertin, Ernest	St. Paul de Metis
Dodds, Geo.	Durlingville
Robertson, William	Onion Lake
Lamb, Robert Graham	Hoselaw

Taber.

Layton, S. J.	Taber
Wright, B. W.	Taber
Crabb, S. A. B.	Barnwell
Lomas, Geo.	Bow Island
Miller, Manly L.	Maybutt
Croxall, Mark Y.	Raymond
Ott, Thos. E.	Raymond
Heighes, Bert	Coaldale
Scott, H. J.	Grassy Lake
Gustave, Ostlund	Stirling
Hardie, Marshall	Burdett

Vegreville.

Roberge, C. C.	Logan
Stewart, J. A.	Mundare
Trimble, John	Vegreville
Hunt, A. W.	Tofield
Halberg, E. R.	Ross Creek
Watson, Andrew	Chipman
McVittie, G. E.	Holden
Hoare, Albert	Tofield
Koroczinski, Mike	Mundare
Waite, T. D.	Ranfurly
Bredeson, Fred.	Kingman
Kjosness, Alfred E.	Ryley
Kerr, W. B. C.	Ranfurly
McCutcheon, Willie	Lavoy
McIntyre, Nicol	Vegreville
Whittaker, Geo. H.	Vegreville
Story, A. A.	Tofield
Raxandall, Smith	Vegreville

Vermilion.

Armitage, W. H.	Mannville
Booher, Noah	Mannville
Philbrick, D.	Myrnam
Good W.	Vermilion
Campbell, A. ..	Innisfree
Berry, D. J.	Vermilion
Bergey, L. D.	Naughton Glen
McFarlane, Robt.	Minburn
Brimacombe, M. A.	Vermilion
Charlton, Dave ..	Mannville
Good, A. E.	Vermilion
Pitman, Wm.	Innisfree
Carell, Marius ..	Fribourg
Bowers, W. H.	Chailey
Berg, Peter P.	Mannville
Trace, L. M.	Innisfree
Olson, E. A.	Innisfree
West, Frederick ..	Rusylvria
Algot, G. J.	Angle Lake
McLachlan, A. J. B.	Mannville

GAME GUARDIAN

ADDRESS

Victoria.

Libbey, J. J.	Fort Saskatchewan
Coxford, A. W.	Lamont
Nemirsky, Theo.	Lamont
Reid, J. H.	Lamont
Minnie, Robt. H.	Andrew
Simmons, E.	Fort Saskatchewan
Woolley, Geo.	Andrew
Weinstock, Otto	Bruderheim
Hare, Jno.	Beaver Hills
Shears, Frank	Bruderheim
Weeks, G. G.	Egremont

Wainwright.

Pound, L. L.	Ribstone
Hass, C. E.	Chauvin
Lewis, S. G.	Chauvin
Armstrong, J. H. G.	Irma
Hanson, D. W.	Wainwright
Watson, Fred.	Rockyford
Ross, P. E.	Wainwright
Lundy, W. T.	Heath

Warner.

Wiltse, U. A.	Foremost
Verburg, Theodore	Coutts

Wetaskiwin.

Dickson, A. R.	Wetaskiwin
Cherrington, R. R.	Wetaskiwin
Hawkins, R. T.	Wetaskiwin
Hanna, L. D.	Wetaskiwin
Wilcher, Jno. G.	Lewisville
Akin, G. B.	Westerose
Gillies, Archie C.	Yeoford
Embertson, Martin	Malmö
Montgomery, L. D.	Wetaskiwin
Wallace, Geo. D.	Wetaskiwin
Knight, Bert	Mulhurst
Larson, Ludvik G.	Minnehik

Whitford.

Yealands, Geo.	Pakan
Shandro, A. S.	Shandro
Lynn, Percy E.	Warwick
Wynn-MacKenzie, E. H.	Warwick
Hawreliak, Wm.	Wasel
Stewart, R.	Whitford
Oakes, Fred.	Veillette
Morton, Tennar A.	Mortonmoor
Iwanchuck, Sidor	Wasel
Burnell, Hy. E.	Mussel
Rush, James	Shining Bank
Watt, W. W.	Pakan

II.—PREVENTION OF PRAIRIE FIRES.

During the spring and fall of 1915 there were fewer prairie fires than in any year for some time. This is owing to the fact that there were heavy rains during the time that the grass would have been otherwise inflammable. No destructive fires have been reported and there is a very noticeable reduction in the number of convictions for infractions of the Prairie Fires Ordinance.

The convictions reported and the total penalties imposed for the years 1907 to 1915, inclusive, are as follows:

Year	No. of Convictions Reported	Total	Average Fine
1907	33	\$ 741.00	\$22.45
1908	105	1,570.00	14.95
1909	94	1,796.00	19.10
1910	247	4,247.38	17.20
1911	33	565.00	18.25
1912	56	1,008.00	18.00
1913	48	984.75	20.52
1914	89	1,395.93	15.68
1915	39	681.16	17.47

The following is a list of the voluntary fire guardians in the Province:

FIRE GUARDIAN ADDRESS

Acadia.

Louci de Delly, H. Mooswa
Foss, M. F. Stoppington

Alexandra.

Tonkin, E. A. Dewberry
Wilson, R. A. Dewberry
Skinner, F. Dewberry
Websdale, C. Dewberry
East, C. Greenlaw
Babcock, Edward S. Lea Park
Avery, Walter Ethelwyn

Beaver River.

Vincent, J. B. Brosseau
Bouliane, G. St. Lina
Flamand, F. Brosseau
Jesson, E. Boyne Lake

Bow Valley.

Martin, Jr., John Rosebud Creek
Treacy, W. A. Hussar
Code, John B. Dorothy
Lawson, Jas. Dorothy
McDuffer, E. N. Dorothy

Calgary.

Thompson, W. A. Calgary
Wheeler, A. O. Calgary
Wooliams, W. D. Calgary
Brewster, Jas. I. Calgary
Woolley-Dodd, A. G. Calgary

Camrose.

Barber, Jno. Iron Creek, Spring Lake
Bowie, Geo. Ferry Point
Hodgson, Francis, J. New Sarepta
Johnston, Chas. Edberg
Roper, Ernest Bittern Lake

Cardston.

Shaw, V. S. Cardston

FIRE GUARDIAN ADDRESS

Claresholm.

Lyndon, W. A. Lyndon

Cochrane.

Bell, E. Dog Pound
 Croxford, W. H. Airdrie
 Elliot, Walter B. Cochrane
 Fry, Herbert Cochrane
 Goddard, Gilbert E. Mitford
 Grahame, Wm. Dog Pound
 McPhee, M. Cochrane
 Nixon, R. I. Crossfield
 Reid, Geo. A. Cochrane
 Stevenson, Johnston Airdrie
 Sutherland, Jas. A. Crossfield
 Urquhart, Wm. Crossfield
 McLeod, Geo. Crossfield
 Crowe, Walter Horse Creek
 McDougal, J. B. Morely
 Fraser, J. A. W. Jumping Pond

Coronation.

Seaman, Lewis Consort
 Brightland, E. W. Talbot
 Wastmead, W. Caseleyville

Didsbury.

Evan, Arthur Three Hills
 McLeod, Jno. Sunnyslope
 Shantz, J. D. Didsbury
 White, Fred. B. Swalwell

Edmonton.

Hayes, J. O'Neill Edmonton
 Mitchell, Arch. Edmonton
 McEachern, Donald Edmonton

Gleichen.

Brown, W. W. Strathmore
 Clark, John Gleichen
 Colquhon, O. G. Gleichen
 Hardwick, Douglas Gleichen, Snake Valley
 Martin, Sr., Dan. Gleichen
 McKinnon, L. Langdon
 Scott, Harry Gleichen
 Bunny, Brice H. Bassano

Grouard.

Tomkins, Peter Grouard

High River.

Carle, Richard P. Pekisko

Hand Hills.

Lund, N. H. Dowling Lake
 Savage, J. G. Delia
 Flett, Lester Hand Hills
 Miller, M. Lawsonburg
 Daly, W. H. Munson

FIRE GUARDIAN ADDRESS

Innisfail.

Alford, R. P.	Pine Lake
Bitton, Wm. Shirley	Knee Hill Valley
Duncan, Geo.	Innisfail
Ellis, Geo. W.	Innisfail
Gaetz, Fred. W.	Pine Lake
Morton-Bell, R.	Trenville
Mustard, H. M.	Markerville
Wynn, Robt.	Knee Hill
Bower, Len. D.	Caroline
Hollender, T.	Evergreen

Lethbridge.

Duff, Duncan	Lethbridge
Fuller, Jas. Dixon	Lethbridge
Kennedy, Edward	Lethbridge
Link, Adam	Lethbridge
Nash, A. C.	Lethbridge

Leduc.

Bradner, Henry	Leduc
Clifford, Frank	Conjuring Creek
Johnson, S. H.	Beaumont
Mortimer, Chas.	Leduc
McEwan, J.	Conjuring Creek
Ohrn, C. H.	Ohrnville
Gilbert, Carl Martin	Telfordville

Lacombe.

Burgess, Jas.	Lamerton
Capron, Jos.	Blackfalds
Grose, W. E.	Clive
Hickling, Horace	Alix
Hilstad, Carl	Bentley
Murphy, H. A.	Lacombe
Paisley, S. W.	Canyon
Pinnell, C. H.	Alix
Tees, James	Clive
Tees, W. E.	Tees
Walters, J. L.	Tees
Whiteside, F. H.	Lamerton
Nurdoch, J. D.	Lamerton

Lac Ste. Anne.

Musselman, D.	Onoway
White, H.	Wabamun
Bennett, Thomas	Padstow

Little Bow.

Gervais, Romain	Loma
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Medicine Hat.

Hargrave, W. H.	Walsh
Markwick, Geo.	Medicine Hat
Boyd, Robt.	Medicine Hat
Little, Wm. J.	Medicine Hat
Hargrave, J. G.	Medicine Hat
Hooper, Sidney	Manyberries
McClain, Fred.	Medicine Hat

FIRE GUARDIAN ADDRESS

Macleod.

Cochrane, Wm. F. Macleod
 Gardner, C. W. E. Macleod
 Maryfield, Fred. T. Macleod

Nanton.

Narrish, J. D. Nanton

Okotoks.

Standish, Chirs. G. Priddis
 Thorne, Wilfrid B. Aldersyde

Ponoka.

Ravensburg, O. C. Asker

Pincher Creek.

Connolly, Alf. T. Pincher Creek
 Eddy, W. T. Cowley
 Godsall, F. W. Cowley
 Porter, Geo. Livingstone
 Smith, Harold J. Pincher Creek
 Riviere, Henry Pincher Creek

Pakan.

Thompson, Lewis Pakan

Red Deer.

Fiske, Robt. E. Hillsdown
 Fisher, F. B. Red Deer
 Gaetz, Fred. Red Deer
 Martin, Angus Red Deer
 Reinholt, J. F. Red Deer
 Frid, A. J. Pitcox
 Kneeshaw, Percy Gaetz Valley

Ribstone.

Whitelock, Jno. Puffer
 Beesley, Chas. W. Provost
 Schwalb, Wm. Czar
 Johnson, Oscar H. English

Rocky Mountain.

Bruneau, Jas. B. Blairmore
 Brewster, Wm. H. Banff
 Robinson, W. C. Cowley
 Livingstone, G. H. Bragg Creek

Redcliff.

Goddard, J. W. Hilda
 Woodruff, H. B. Waddington

St. Albert.

Hughson, W. S. Manawan
 Hall, Thos. Manawan
 Verstracte, Camille Villeneuve

St. Paul.

Koppang, G. Rite
 DuBord, E. Durlingville
 Amsden, R. C. Elk Point

FIRE GUARDIAN

ADDRESS

Stony Plain.

Knapp, H. H.	Winterburn
Mills, Chas.	Inga
McDonald, J. L.	Stony Plain
Steffler, Ed.	Spruce Grove Centre

Stettler.

Ellwood, Jas.	Gopher Head
Lensman, Gus.	Mayville
Petterson, Geo. W.	Red Willow
Gardener, E. M.	Gopher Head
Usher, Chas.	Scollard
Runn, J. B.	Garden Plains
McGregor, Charles S.	Endiang

Sedgewick.

Seeman, Ludwig	Vallejo
Jones, H. M.	Ethelwyn
Grant, John	Ethelwyn

Sturgeon.

Gibbons, W. R.	Battenburg
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Strathcona.

Ellet, Chas. C.	Strathcona
McAllister, Geo.	Strathcona
Walters, John Wm.	Strathcona
Liston, John	Strathcona
Powers, Wm.	Strathcona

Taber.

Steed, Frank O.	Stirling
Depew, Warren	Raymond
McCarty, C.	Raymond
Cox, E.	Grassy Lake
Furman, Jno.	Grassy Lake
Scott, O. J.	Sweet Valley
Jones, Elmer	Sundial
Connor, W. E.	Sundial
Thwaites, Robt.	Sundial
Doan, R.	Barney
Slawson, D. K.	Burdett
Cochran, J. W.	Travers

Vermilion.

Campbell, A.	Innisfree
Good, Wm.	Vermilion
Bergey, L. D.	Naughton Glen
Silverlock, A. F.	Perguis
Pitman, Wm.	Innisfree
Fielding, Percy	Mulga

Victoria.

Bevington, Chas. E.	Fort Saskatchewan
Dzivenka, Jos.	Wostock
Halkow, Jno.	Wostock
Simmons, W. L.	Star
McGall, David	Fort Saskatchewan
Nemirsky, Theo.	Wostock
Simmons, Elsworth	Fort Saskatchewan

Warner.

Ashe, Percy G.	Coutts
---------------------	--------

FIRE GUARDIAN

ADDRESS

Wainwright.

Sheridan, T. F. Wainwright
 Talbot, W. C. **Irma**

Wetaskiwin.

Newton, Haydon Wetaskiwin
 Gillies, Archie C. Yeoford
 Swanson, C. H. Wetaskiwin
 Wilcher, John G. Lewisville

Whitford.

Richardson, Silas Whitford

Respectfully submitted,

B. LAWTON,
Chief Game and Fire Guardian.



OATS IN ALBERTA IN 1915.

REPORT OF THE CROP STATISTICIAN

SIR,—I have the honour to submit herewith my report on the crop statistics of the Province, the same being for the year 1915:

WEATHER CONDITIONS AND STATISTICS.

The following tables regarding the weather conditions prevailing during the year have been obtained from the Dominion Meteorological Office at Toronto and are the work largely of a corps of voluntary observers throughout the Province.

MONTHLY WEATHER REPORT FOR 1915.

January.

Edmonton.—The weather generally was fair and comparatively mild; sleighing and trails good; a large quantity of outdoor work is being conducted this season. Medicine Hat.—About 8 inches of snow on the ground; stock looking well. Swift Current.—Fine weather and moderate winds.

February.

Edmonton.—Sunshine, 133 hours; month fair and comparatively mild, with moderate and even temperatures; precipitation, slight; winds, light to moderate; sleighing and trails good. Qu'Appelle.—Depth of snow on ground, 4 inches, in bluffs, many places bare; weather for February unusually mild, but not much sunshine. Medicine Hat.—About one foot of snow on the ground, and crusted; stock not doing well; feed scarce; currently reported a hard winter on stock. St. Alban's.—This has been the mildest winter we have had for some years.

March.

Edmonton.—One hundred and sixty-seven hours of bright sunshine; ground bare. Month throughout fine and mild with moderate and even temperatures. Light to moderate southerly winds prevailing with slight precipitation on four days only. Barometer relatively high with small range. River opening up, ice not safe, large reaches of open water. Trails soft and broken. Harrowing in southern Alberta on 17th. Winter throughout notably mild with from 8 to 14 inches of snow. Medicine Hat.—Feed for stock very scarce; stock in general in poor condition, some losses. Weather during month very steady with barometer high. Ice broke on Saskatchewan River on 10th. Geese going north on 31st.

April.

Edmonton.—Month opened with advanced spring conditions; temperatures rising daily with mild southerly winds prevailing and moderate precipitation forcing plant life. Migratory birds seen north bound on the 1st; river ice moved out on the 2nd; marked change on the 20th; barometer falling with moderate southeast gale veering to north, bringing a nine hour snowfall and reducing temperature to normal with some light night frosts; no interference with farming activity; wheat seeding about finished; seeding of oats and other grains well advanced under excellent conditions; month closes cloudy and warm; bright sunshine, 247 hours. Calgary.—Seeding nearly all done. Medicine Hat.—No precipitation during the month; grass growing nicely. Farmers nearly finished seeding, prospects good, stock improving, farmers hopeful.

May.

Edmonton.—Weather throughout cloudy and cool with prevailing easterly winds and a deficiency of sunshine with moderate and even temperatures. Precipitation plentiful and well distributed over south and central areas, with timely rain on the 26th over local and northern districts. Crop

HOURS OF SUNSHINE RECORDED FOR 1915.

STATION	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Edmonton	95	133	167	247	213	224	254	330	179	153	127	83
Lethbridge	112	126	165	229	230	226	290	334	161	180	141	96
Lacombe	70	110	165	215	130	...	242	299	170	145	121	83
Medicine Hat	94	131	180	261	231	247	304	335	159	185	119	87
Fort Dunvegan	27	53	99	109	147	...	215	...	...	...	82	122
Fort Vermilion	57	...	...	...	252	356	325	305	173	98	90	61

MAXIMUM AND MINIMUM TEMPERATURES FOR METEOROLOGICAL STATIONS IN ALBERTA FOR 1915.

STATION		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
NORTH SASKATCHEWAN RIVER													
Campsie	{ Maximum . . .	44.7	37.4	60.8	77.5	75.4	74.2	79.0	86.0	78.0	75.0	54.0	40.0
	{ Minimum . . .	-27.5	-19.7	-0.5	18.5	27.7	30.6	31.0	33.0	19.0	10.0	-17.0	-21.0
Daysland	{ Maximum . . .	39.0	38.0	58.0	80.0	81.0	78.0	82.0	88.0	78.0	71.0	52.0	40.0
	{ Minimum . . .	-31.0	-2.0	-2.0	25.0	22.0	30.0	36.0	41.0	21.0	18.0	-1.0	-10.0
Edmonton	{ Maximum . . .	42.0	41.0	62.0	79.0	77.0	74.0	78.0	87.0	77.0	72.0	53.0	41.0
	{ Minimum . . .	-24.0	-13.0	5.0	23.0	27.0	32.0	37.0	43.0	20.0	16.0	3.0	-6.0
Endiang	{ Maximum . . .	...	37.0	42.0	79.0	...	...	...	88.0	75.0	71.0	58.0	...
	{ Minimum . . .	...	-8.4	-4.5	22.0	...	...	...	42.0	12.0	17.0	-11.0	...
Halkirk	{ Maximum . . .	38.0	30.0	48.0	76.0	76.0	77.0	79.0	88.0	77.0	66.0	47.0	39.0
	{ Minimum . . .	34.0	-9.0	-7.0	21.0	28.0	29.0	34.0	37.0	10.0	13.0	-8.0	-13.0
Hardisty	{ Maximum . . .	39.0	34.0	57.0	74.0	78.0	74.0	80.0	89.0	75.0	...	52.0	42.0
	{ Minimum . . .	36.0	10.0	-2.0	22.0	24.0	31.0	35.0	35.0	12.0	...	2.0	12.0
Loveland	{ Maximum . . .	39.0	37.0	58.0	80.0	77.0	75.0	80.0	90.0	75.0	76.0	51.0	40.0
	{ Minimum . . .	-32.0	-14.0	-4.0	26.0	26.0	30.0	39.0	36.0	14.0	16.0	-5.0	-10.0
Nordegg	{ Maximum . . .	...	...	...	...	...	...	...	82.0	70.0	60.0	...	46.0
	{ Minimum . . .	...	...	...	...	...	...	...	37.0	16.0	15.0	...	4.0
Provost	{ Maximum . . .	34.0	31.5	45.5	75.0	76.0	74.0	80.0	88.0	75.0	...	48.0	41.0
	{ Minimum . . .	-41.5	-20.0	-4.5	22.3	27.0	31.0	34.0	32.0	14.0	...	-6.0	-6.0
Ranfurly	{ Maximum . . .	...	33.5	54.4	77.0	77.0	76.0	80.0	...	...	...	...	40.0
	{ Minimum . . .	...	-11.0	-3.0	22.0	25.0	28.0	35.0	...	...	...	...	-11.0
Rocky Mountain House	{ Maximum . . .	...	...	...	...	...	...	...	...	...	...	...	...
	{ Minimum . . .	...	...	...	...	...	...	...	...	...	...	...	...
Sedgewick	{ Maximum . . .	...	25.0	...	...	...	...	...	...	...	...	...	...
	{ Minimum . . .	...	0.	...	...	...	...	...	...	...	...	...	...
Sion	{ Maximum . . .	45.0	27.0	60.0	86.0	75.0	75.0	80.0	84.0	76.0	71.0	50.0	35.0
	{ Minimum . . .	-23.0	-17.0	-2.0	18.0	23.0	25.0	29.0	39.0	15.0	14.0	-12.0	-10.0
Twin Lakes	{ Maximum . . .	51.0	45.0	63.0	76.0	71.0	74.0	82.0	87.0	71.0	71.0	59.0	56.0
	{ Minimum . . .	-22.0	2.0	-5.0	28.0	30.0	31.0	35.0	38.0	17.0	18.0	5.0	-14.0
Vermilion	{ Maximum . . .	38.0	28.0	55.0	74.0	76.0	...	...	...	...	...	...	...
	{ Minimum . . .	-44.0	-19.0	-11.0	10.0	23.0	...	...	...	...	...	...	...
Wastina	{ Maximum . . .	38.0	34.0	39.0	80.0	76.0	75.0	78.0	92.0	77.0	75.0	52.0	45.0
	{ Minimum . . .	-43.0	-15.0	-7.5	17.0	25.0	30.5	36.0	31.0	7.0	16.0	-9.0	-13.0

MAXIMUM AND MINIMUM TEMPERATURES FOR METEOROLOGICAL STATIONS IN ALBERTA FOR 1915.—(Continued).

STATION		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
ALBERTA RIVER													
Alaska	{ Maximum	43.0	44.0	64.0	82.0	81.0	80.0	84.0	91.0	80.0	71.0	55.0	45.0
	{ Minimum	-27.0	-11.0	-6.0	19.0	29.0	33.0	40.0	44.0	18.0	15.0	-8.0	-10.0
Clemens	{ Maximum	41.0	39.0	45.0	76.0	76.0	78.0	81.0	93.0	86.0	80.0	65.0	45.0
	{ Minimum	-37.0	-14.0	-5.0	29.0	29.0	27.0	30.0	32.0	18.0	24.0	0.	-4.0
Fiddsbury	{ Maximum	39.0	46.0	66.0	76.0	76.0	78.0	81.0	93.0	86.0	80.0	65.0	45.0
	{ Minimum	-30.0	4.0	4.0	22.0	30.0	32.0	40.0	46.0	18.0	24.0	0.	-4.0
Empress	{ Maximum	46.0	46.0	66.0	76.0	76.0	78.0	81.0	93.0	86.0	80.0	65.0	45.0
	{ Minimum	-18.0	4.0	4.0	22.0	30.0	32.0	40.0	46.0	18.0	24.0	0.	-4.0
Harmattan	{ Maximum	46.0	44.0	66.0	76.0	76.0	78.0	81.0	93.0	86.0	80.0	65.0	45.0
	{ Minimum	-28.0	11.0	-3.0	14.0	25.0	30.0	38.0	40.0	13.0	17.0	12.0	17.0
Hilldown	{ Maximum	43.5	40.5	61.0	81.0	78.7	73.0	79.0	83.0	73.0	70.0	52.0	49.0
	{ Minimum	-21.0	-3.0	0.	20.0	31.0	33.0	35.0	43.0	17.0	16.0	-2.0	-5.0
Jenner	{ Maximum	46.0	44.0	66.0	76.0	76.0	78.0	81.0	93.0	86.0	80.0	65.0	45.0
	{ Minimum	-28.0	11.0	-3.0	14.0	25.0	30.0	38.0	40.0	13.0	17.0	12.0	17.0
Lacombe (Experimental Farm)	{ Maximum	46.8	42.8	65.0	80.0	76.5	75.8	80.0	87.0	74.0	74.0	54.0	49.0
	{ Minimum	25.1	6.6	-1.0	13.9	30.0	31.9	35.0	41.0	16.0	10.0	-9.0	-12.0
Moose (Tyrol)	{ Maximum	35.0	35.0	56.5	75.0	75.0	79.5	80.0	87.0	74.0	74.0	54.0	49.0
	{ Minimum	-48.0	-18.0	-18.0	20.0	20.0	24.0	35.0	41.0	16.0	10.0	-9.0	-12.0
Olds	{ Maximum	39.5	40.0	58.0	82.0	79.0	77.0	82.0	91.0	80.0	69.0	48.0	42.0
	{ Minimum	-24.0	-9.5	-3.5	20.0	29.5	33.0	38.0	42.0	15.0	21.0	0.	-12.0
Perbeck	{ Maximum	41.5	41.0	61.0	79.0	77.0	73.0	79.0	86.0	80.0	72.0	53.0	46.0
	{ Minimum	-27.0	-10.0	1.0	16.0	28.0	32.0	35.0	42.0	14.0	16.0	-9.0	-14.0
Rosedale	{ Maximum	42.0	44.5	59.0	84.0	82.5	80.5	86.0	93.0	82.0	76.0	56.0	48.0
	{ Minimum	-23.5	-8.5	3.5	17.5	24.5	33.5	38.0	43.0	19.0	17.0	-11.0	-9.0
Springdale	{ Maximum	47.0	40.5	60.0	69.0	76.5	73.0	77.0	83.0	72.0	71.0	50.0	45.0
	{ Minimum	-25.5	-15.0	-8.0	16.0	27.5	29.0	32.0	37.0	14.0	14.0	-15.0	-15.0

MAXIMUM AND MINIMUM TEMPERATURES FOR METEOROLOGICAL STATIONS IN ALBERTA FOR 1915.—(Continued).

STATION		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
THE BOW RIVER													
Bassano (White Farm)	{ Maximum	45.0	41.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	57.0
	{ Minimum	28.0	12.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	8.0
Brooks (1)	{ Maximum	.....	.....	.....	78.0	75.0	80.0	82.0	99.0	81.0	70.0	.....	.....
	{ Minimum	.....	.....	.....	25.0	28.0	35.0	39.0	46.0	25.0	22.0	.....	.....
Brooks (2)	{ Maximum	.....	.....	.....	.....	.....	83.0	87.0	99.0	85.0	.....	63.0	53.0
	{ Minimum	.....	.....	.....	.....	.....	36.0	40.0	46.0	15.0	.....	-9.0	14.0
Calgary	{ Maximum	47.0	46.0	66.0	77.0	78.0	78.0	81.0	88.0	82.0	76.0	55.0	51.0
	{ Minimum	-24.0	0.	4.0	24.0	31.0	35.0	38.0	46.0	24.0	26.0	0.	9.0
Clareholm	{ Maximum	47.0	45.0	58.0	78.0	78.0	71.0	.....	.....	89.0	79.0	58.0	52.0
	{ Minimum	25.5	5.0	7.0	25.0	28.0	35.0	.....	.....	8.0	24.0	-3.0	16.0
Expansé Coulee	{ Maximum	43.0	40.0	52.0	83.0	80.0	83.0	85.0	96.0	36.0	79.0	64.0	52.0
	{ Minimum	30.0	14.0	7.0	25.0	21.0	34.0	38.0	42.0	24.0	19.0	-11.0	17.0
Langdon	{ Maximum	.....	.....	.....	.....	.....	77.0	82.0	87.0	82.0	76.0	.....	.....
	{ Minimum	.....	.....	.....	.....	.....	30.0	36.0	42.0	20.0	24.0	.....	.....
Gleichen	{ Maximum	43.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50.0
	{ Minimum	17.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	-11.0
High River	{ Maximum	.....	.....	.....	.....	.....	.....	.....	.....	76.0	73.0	.....	.....
	{ Minimum	.....	.....	.....	.....	.....	.....	.....	.....	5.0	10.0	.....	.....
Leithbridge (Experimental Farm)	{ Maximum	52.0	47.2	67.2	81.9	78.4	79.0	87.0	93.0	81.0	79.0	61.0	55.0
	{ Minimum	26.5	4.0	1.8	21.0	28.5	36.0	36.0	45.0	20.0	20.0	-4.0	-12.0
Lundbreck	{ Maximum	.....	44.0	64.0	74.0	70.0	76.0	80.0	83.0	72.0	67.0	51.0	47.0
	{ Minimum	.....	4.0	-10.0	18.0	26.0	31.0	33.0	38.0	16.0	18.0	2.0	-16.0
Macleod	{ Maximum	46.5	.....	63.0	82.0	79.0	83.0	89.0	93.0	79.0	73.0	57.0	54.0
	{ Minimum	25.0	.....	5.0	27.0	33.0	35.5	40.0	45.0	25.0	21.0	6.0	-4.0
Medicine Hat	{ Maximum	42.0	43.0	57.0	87.0	82.0	85.0	90.0	97.0	84.0	78.0	63.0	53.0
	{ Minimum	27.0	9.0	1.0	29.0	28.0	40.0	43.0	48.0	28.0	29.0	0.	-3.0
Milk River	{ Maximum	.....	.....	.....	.....	.....	.....	.....	92.0	78.0	77.0	60.0	48.0
	{ Minimum	.....	.....	.....	.....	.....	.....	.....	43.0	21.0	24.0	-4.0	-10.0
Minda (Manyberries Ranch)	{ Maximum	.....	.....	.....	.....	.....	.....	.....	90.0	77.0	.....	.....	.....
	{ Minimum	.....	.....	.....	.....	.....	.....	.....	40.0	23.0	.....	.....	.....
Okotoks	{ Maximum	46.0	45.0	61.0	76.0	73.0	70.0	77.0	80.0	75.0	70.0	55.0	52.0
	{ Minimum	-23.0	0.	2.0	25.0	31.0	32.0	41.0	47.0	16.0	22.0	6.0	-13.0

STATIONS		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
NORTH SASKATCHEWAN RIVER														
Campsie	1.14	0.23	0.04	1.30	2.21	4.10	3.84	0.46	1.66	1.66	0.05	1.13	0.10	16.26
Daysland	0.70	0.10	0.30	0.62	2.27	5.53	4.91	0.66	1.77	1.77	0.19	0.75	0.50	18.30
Edmonton	1.04	0.02	0.10	0.92	1.30	5.46	4.24	3.24	0.97	0.97	0.21	0.60	0.54	18.64
Endiang	0.22	0.30	0.05	0.20	5.05	4.30	4.87	0.79	1.63	1.63	0.81	0.60	.....	* 4.33
Halkirk	0.22	0.15	0.05	0.56	5.05	4.30	4.87	0.20	1.70	1.70	0.90	0.75	.....	* 18.75
Hardisty	0.21	.....	0.15	0.29	1.87	3.67	3.97	0.74	1.22	1.22	.....	0.55	0.15	* 12.82
Loveland	0.60	.....	.....	0.60	2.89	3.66	5.70	1.22	1.68	1.68	0.22	0.08	0.15	* 16.80
Nordegg .....	.....	.....	.....	.....	.....	.....	.....	.....	1.67	1.67	0.73	0.30	0.31	* 3.01
Provost	0.30	0.50	Trace	0.58	3.19	3.53	2.89	0.97	0.66	0.66	.....	0.25	0.25	* 13.12
Ranfurly (Waitefield) .....	.....	0.07	0.13	1.46	3.31	3.13	6.37	.....	.....	.....	.....	0.35	0.35	* 15.82
Rocky Mountain House .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.65	.....	* 6.84
Sedgewick .....	.....	.....	.....	.....	.....	.....	4.35	0.33	1.43	1.43	2.34	0.26	.....	* 6.55
Sion	0.68	0.30	0.10	1.69	1.28	6.21	3.64	1.49	1.77	1.77	0.41	1.08	0.65	19.30
Twin Lakes	1.50	1.55	1.27	1.83	2.30	9.60	5.39	0.86	3.95	3.95	2.15	0.90	1.30	32.60
Vermilion	0.30	Trace	.....	0.53	0.95	.....	.....	.....	.....	.....	.....	.....	.....	* 1.78
Wastina .....	.....	.....	.....	.....	3.04	4.53	2.59	0.74	1.26	1.26	0.46	.....	0.25	* 12.87
RED DEER RIVER														
Alix	0.53	.....	0.23	1.11	2.34	5.45	3.24	0.85	1.56	1.56	1.01	0.90	0.80	* 18.02
Alsask	0.20	0.40	Trace	.....	6.24	.....	.....	.....	.....	.....	.....	.....	.....	* 6.84
Clemens	0.31	.....	0.85	.....	.....	5.20	3.54	.....	.....	.....	.....	.....	.....	* 9.90
Didsbury	0.40	0.40	Trace	0.60	6.05	5.27	9.32	2.07	2.39	2.39	1.03	0.60	0.20	28.33
Harmattan	0.65	0.10	.....	1.00	6.00	6.57	8.58	2.63	2.10	2.10	1.60	0.30	1.10	* 29.03
Hilldown	0.69	0.10	0.05	0.53	2.58	5.25	2.51	1.23	1.67	1.67	1.59	0.90	0.35	17.49
Lacombe (Experimental Farm)	0.30	0.03	0.75	0.32	1.25	8.28	2.79	0.84	1.83	1.83	0.53	0.30	.....	* 17.22
Perbeck	0.35	0.20	0.05	0.32	4.33	7.03	5.84	2.30	2.97	2.97	2.60	0.50	0.20	25.74
Red Deer	0.95	.....	0.01	0.48	4.30	4.81	3.36	0.69	2.40	2.40	1.94	0.50	0.03	* 19.47
Rosedale .....	.....	.....	Trace	0.20	2.15	5.42	2.65	0.94	1.47	1.47	0.92	0.35	.....	* 14.10
Springdale	0.71	0.05	0.36	0.81	1.59	8.00	4.24	1.80	2.28	2.28	0.63	0.42	0.22	21.11
BOW RIVER														
Brooks .....	.....	.....	.....	.....	.....	5.41	1.55	2.07	0.05	0.05	.....	0.10	0.28	* 10.06
Calgary	0.40	0.23	0.07	0.46	3.13	4.02	3.98	0.68	2.33	2.33	2.17	0.47	0.30	18.24
Clareholm	0.70	0.66	0.25	0.35	3.53	7.82	.....	.....	2.88	2.88	0.80	0.21	0.15	* 17.35

MONTHLY PRECIPITATION FOR 1915.—(Continued).

STATIONS	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Expanse Coulee	0.51	1.12	0.06	0.15	3.25	4.50	2.49	0.76	0.98	0.98	0.33	0.31	15.44
Langdon .....	.....	.....	.....	.....	.....	5.49	5.07	1.08	2.64	0.45	.....	.....	*14.73
Lethbridge (Experimental Farm)	0.50	0.94	0.22	0.04	3.03	4.84	3.44	0.96	1.32	0.96	0.83	0.32	17.40
Lundbreck .....	.....	0.73	1.43	0.87	5.12	6.83	4.54	1.32	1.50	1.58	0.73	0.87	*25.52
Macleod	1.05	.....	1.15	0.12	2.32	3.24	4.40	2.26	0.61	0.51	0.65	0.26	*16.57
Medicine Hat	0.38	1.15	0.02	Trace	2.72	4.67	3.58	0.20	2.17	1.01	0.09	0.14	16.13
Milk River .....	.....	.....	.....	.....	.....	.....	.....	0.46	2.01	1.35	1.10	0.80	* 5.72
Okotoks	0.60	0.45	0.50	0.25	3.11	5.59	5.37	2.22	1.89	0.87	0.35	0.35	21.55
Pekisko	1.33	1.35	1.28	1.47	8.92	10.02	4.07	1.88	3.40	1.73	1.00	1.55	38.00
Pincher Creek	1.03	1.73	1.24	1.89	3.37	7.68	4.01	1.24	2.31	1.60	0.33	1.23	27.57
Ronolane	0.40	1.50	0.06	0.09	1.69	4.15	3.26	0.75	1.29	0.72	Trace	0.02	13.93
Strathmore .....	.....	0.45	.....	.....	3.42	4.77	4.89	1.48	2.58	0.74	0.30	0.20	*18.83
Suffield	0.37	1.00	0.20	0.01	1.81	3.68	3.22	0.95	2.11	0.83	.....	0.53	*14.71
Sundial .....	.....	.....	.....	0.25	2.58	5.46	4.20	.....	1.21	1.16	Trace	.....	*14.86
ROCKY MOUNTAINS													
Banff	1.06	0.75	0.30	1.00	2.34	6.05	3.96	1.47	2.69	1.73	0.48	1.53	23.36
Lake Louise .....	.....	0.88	0.43	1.66	1.48	5.70	4.56	1.29	2.28	3.05	1.97	2.41	*25.71
Mountain Park .....	.....	.....	2.13	2.68	4.55	12.26	.....	.....	2.54	.....	.....	.....	*24.16
ATHABASCA RIVER													
Athabasca	0.45	0.20	0.05	1.83	1.98	2.46	2.44	0.81	1.38	0.39	0.35	0.62	12.96
Wabasca .....	.....	.....	.....	0.97	.....	2.08	4.18	0.18	1.75	0.39	0.45	0.68	*10.68
PEACE RIVER													
Beaver Lodge	0.25	.....	.....	1.15	1.53	2.40	5.66	1.24	1.54	0.77	0.65	0.30	*15.49
Fort Vermilion	0.20	.....	.....	.....	.....	1.08	1.60	1.97	0.38	1.30	0.38	0.83	* 7.74

* Reports cover only part of the year.

ANNUAL PRECIPITATION FROM 1906 TO 1915 INCLUSIVE

STATION	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
NORTH SASKATCHEWAN RIVER										
Bardo	*15.59	*18.05	11.65	*10.49	16.94	13.85	12.62	*17.65	.....
Bismark	18.14	*17.04	10.88	11.68	*30.18	17.21	* 8.45	*14.69	.....
Bittern Lake	*17.19	*18.51	*11.53	13.80	20.10	18.81	16.10	22.23	.....
Bruderheim	*12.07	*12.06	*11.03	*13.56	*18.68	* 2.69	* 0.50	.....	.....
Campsie	*14.02	17.43	*10.70	*18.34	24.51	16.20
Conjuring Creek	18.57	18.59	13.63	* 4.05	* 4.02	*18.19	* 0.67	* 2.07	.....
Coronation	*10.60	.....	.....
Daysland	*14.65	* 0.60	*10.31	* 0.65	20.87	*14.78	22.65	18.30
Edmonton	*13.48	16.62	17.89	14.30	14.43	20.67	19.55	19.55	25.29	18.66
Endiang	15.78	17.77	13.09	19.21	* 4.33
Halkirk (Emsburg)	17.55	11.47	*10.04	20.69	21.63	13.97	20.11	*18.75
Hardisty	* 1.95	*12.82
Kinnaird	* 5.46	.....
LaPearl	*11.56	* 7.64	* 5.53	.....
Lloydminster	*11.56	* 7.64	* 2.14	.....
Loveland	*35.70	*14.33	*20.44	* 9.83	*19.75	*16.80
Pakan	15.83	*18.32	*27.31	13.91	*23.06	14.56	*15.77	.....	.....	.....
Provost	* 3.00	*13.12
Ranbury (Walterfield)	20.32	22.93	*15.82
Roycroft Ranch (Mannville)	*12.84	.....	.....
Sedgewick	* 0.08	* 0.20	* 6.55
Sion	*19.79	84.36	*15.70	21.79	28.38	19.30
Twin Lakes	17.11	17.98	20.69	.....	.....	.....	.....	* 6.42	32.69
Vermilion	* 5.06	* 0.94	* 1.78
Wastina	* 6.18	*11.02	*12.87
Wetaskwin	16.64	17.97	13.94	13.94	*17.40	36.50	*12.51	16.97	* 0.80	.....
THE RED DEER RIVER										
Alix	13.00	*13.91	14.15	14.39	10.29	22.34	20.14	*1.74	*15.45	*18.02
Alaska	* 3.11	*12.69	* 6.84
Clemens	*10.18	*12.34	* 9.90
Delia	*14.78	*14.23	14.04	.....	.....
Didsbury	22.07	*27.11	*21.89	20.99	*17.48	23.35	22.02	19.81	17.35	28.33

ANNUAL PRECIPITATION FROM 1906 TO 1915 INCLUSIVE—(Continued)

STATION	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
Dorenee (Bashaw)	19.50	18.60	*15.99	* 5.10	26.54	16.45	*11.33	* 3.80	.....
Empress	7.11	*12.09	*19.13	22.62	18.29	16.09	*29.03
Harmattan	17.51	*18.64	18.16	21.25	23.43	*16.30	10.33	19.03	17.49
Hillsdown	16.06	.....	.....	8.01	13.28	21.44	21.83	* 4.74	18.29	*17.22
Lacombe (Experimental Farm)	*18.52	*15.33	.....	.....	.....	.....	.....	.....	.....
Lacombe	*17.66	15.34	13.04	* 9.87	* 5.60	* 9.37	* 7.12	.....
Moose (Tyrol)	* 4.80	.....	.....
Olds	*10.85	*10.85	.....
Perbeck	* 9.43	16.26	25.79
Ponoka	*19.53	17.87	10.04	14.61	20.10	*14.01	*14.72	*22.67	.....
Red Deer	26.73	26.73	*19.47
Rosedale	*17.75	.....	.....	.....	*14.10
Springdale	20.55	21.11
THE BOW RIVER										
Bassano (White Farm)	* 1.10	.....
Brooks (1)	19.93	* 6.90	17.60	* 8.08	* 1.13	* 0.05	.....
Brooks (2)	*11.36	13.89	* 9.51	*10.06
Caldwell	37.04	*18.02	*17.18	21.76	.....
Calgary	16.24	14.95	18.25	15.03	12.03	19.99	*20.14	17.38	17.71	18.24
Claresholm (1)	* 2.07	*12.03	*17.63	*17.35
Claresholm (2)	19.33	.....
Clarinda	* 9.69	14.53	.....
Coleman	* 3.85	20.73	26.72	.....
Cree Bank Ranch (Cowley)	3.28	17.02	25.16	.....
Expenses (Culdee)	* 0.87	*10.41	15.44
Gleichen	16.61	*11.39	*15.89	19.14	* 9.41	*13.63	*10.34	*11.41	* 8.63	.....
Grassy Lake	* 4.94	* 8.22	* 9.20	* 5.15	11.60	* 5.60	*12.27	6.65	.....
High River	16.05	15.58	9.31	9.33	17.03	* 8.90	*12.72	* 2.00	.....
Jumping Pond	16.09	20.14	16.88	12.80	*10.13	*27.58	17.98	*14.54	.....
Lawrence (Parkland)	12.19	*14.69	11.69	9.66	15.58	* 6.00	*13.07	* 3.75	.....
Lethbridge	15.50	16.16	11.69	* 5.66	22.16	* 9.13	13.18	15.23	.....
Lethbridge (Experimental Farm)	*22.48	.....	*13.97	10.36	* 7.41	21.19	13.21	14.17	17.58	17.40
Lineham	13.46	23.68	23.86	*19.48	.....

ANNUAL PRECIPITATION FROM 1906 TO 1915 INCLUSIVE—(Continued)

ANNUAL PRECIPITATION FROM 1906 TO 1915 INCLUSIVE. (Continued)

STATION	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
Jasper	.....	.....	.....	.....	*14.37	19.63	.....	.....	.....	.....
Lunnford	.....	.....	.....	.....	*6.89	*18.52	18.14	*17.14	.....	.....
Pembina	.....	.....	12.22	4.02	.....	.....	*11.71	*4.77	.....	*10.68
Wabasca	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
PEACE RIVER										
Beaver Lodge	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dunvegan	14.49	*8.66	*11.29	8.33	*7.45	.....	.....	*14.64	*10.40	*15.49
Fort Vermilion (1)	*8.23	*3.19	*3.57	9.55	*1.69	*11.57	9.81	*14.32	*9.08	.....
Fort Vermilion (2)	.....	.....	.....	.....	.....	*13.29	*10.18	*13.17	*4.28	*7.74
Grande Prairie	.....	.....	.....	.....	.....	.....	.....	*8.06	*6.90	.....
Peace River Crossing	.....	*2.81	*12.33	*9.05	*10.98	*17.17	*5.38	*23.99	*9.05	.....

*Reports cover only part of the year.

SUMMARY OF THE ACREAGE AND YIELDS OF THE LEADING GRAINS
DURING THE LAST TEN YEARS.

	Year	Crop Area in acres	Total Yield in bushels	Average Yield per acre	Average Yield
Spring Wheat	1915	1,637,122	58,830,704	35.93	20.16
	1914	989,561	15,102,083	15.26	
	1913	1,043,114	20,360,104	19.51	
	1912	957,874	17,434,774	18.20	
	1911	757,493	15,730,238	20.75	
	1910	450,493	5,697,956	12.85	
	1909	324,472	6,155,455	18.97	
	1908	212,677	4,001,504	18.81	
	1907	123,935	2,261,610	18.25	
	1906	115,502	2,664,661	23.07	
Winter Wheat	1915	31,954	1,257,985	39.37	22.40
	1914	49,930	837,204	16.77	
	1913	83,719	1,250,129	14.93	
	1912	120,811	2,395,875	19.83	
	1911	182,671	4,336,749	23.74	
	1910	142,467	2,206,564	15.48	
	1909	102,167	2,312,344	22.63	
	1908	104,956	3,093,422	29.47	
	1907	83,965	1,932,925	20.66	
	1906	61,625	1,301,359	21.11	
Oats	1915	1,570,591	90,582,694	57.66	36.99
	1914	1,147,382	34,597,117	30.15	
	1913	1,221,450	44,078,325	36.09	
	1912	971,969	37,085,234	38.15	
	1911	669,827	27,604,993	41.21	
	1910	492,589	12,158,530	24.68	
	1909	693,901	24,819,661	35.76	
	1908	431,145	15,922,974	36.93	
	1907	307,093	9,247,914	30.11	
	1906	335,728	13,136,913	39.12	
Barley	1915	374,062	12,761,187	34.11	26.60
	1914	340,992	7,847,640	23.01	
	1913	333,462	8,645,812	25.92	
	1912	225,055	6,287,112	27.94	
	1911	103,302	3,037,584	29.41	
	1910	90,901	1,889,509	20.79	
	1909	107,764	3,310,332	30.72	
	1908	77,876	1,949,164	25.03	
	1907	54,698	1,082,460	19.78	
	1906	73,588	2,157,957	29.32	
Flax	1915	41,213	569,762	13.57	8.68
	1914	41,656	207,115	4.97	
	1913	96,445	799,653	8.29	
	1912	112,776	1,196,416	10.60	
	1911	16,549	153,908	9.30	
	1910	15,271	46,155	3.02	
	1909	12,479	131,531	10.54	
	1908	9,262	73,762	7.96	
	1907	6,488	50,002	7.87	
	1906	3,647	38,491	10.65	

SUMMARY OF THE ACREAGE AND YIELDS OF THE LEADING GRAINS
DURING THE LAST TEN YEARS.—(Continued).

	Year	Crop Area in acres	Total Yield in bushels	Average Yield per acre	Average Yield
Rye	1915	12,067	291,399	24.14	19.32
	1914	14,623	261,843	17.90	
	1913	17,452	370,661	21.24	
	1912	2,493	54,119	21.70	
	1911	2,190	38,722	17.68	
	1910	1,522	28,306	18.60	
	1909	1,592	25,801	16.20	
	1908	1,250	22,625	18.10	
	1907	591	10,595	17.91	
	1906	1,139	22,462	19.70	
Speltz	1915	1,194	38,752	32.45	21.89
	1914	2,025	42,707	21.09	
	1913	3,625	70,998	19.59	
	1912	774	11,528	14.89	
	1911	203	5,337	26.29	
	1910	18	164	9.11	
	1909	269	6,369	23.67	
	1908	484	9,697	20.03	
	1907	151	3,346	22.15	
	1906	385	11,423	29.67	

	Total Crop Area	Total Yield of Grain
1915	3,668,238	164,332,483
1914	2,586,169	58,895,709
1913	2,799,267	75,575,682
1912	2,391,752	64,465,058
1911	1,732,648	50,907,531
1910	1,193,261	22,027,184
1909	1,242,644	36,761,493
1908	837,641	25,073,147
1907	576,821	14,588,852
1906	591,614	19,333,266

CROP STATISTICS.

SPRING WHEAT.

No	Crop District	Year	Bushels	Acreage	Yield per Acre.
1	Medicine Hat	1914	117,679	36,644	3.21
		1915	2,905,459	77,501	37.48
2	Warner	1914	86,111	11,781	7.31
		1915	1,837,380	49,568	37.06
3	Cardston	1914	255,271	22,386	11.40
		1915	1,239,436	29,438	42.10
4	Pincher Creek	1914	59,080	5,578	10.59
		1915	370,251	10,693	34.62
5	Macleod	1914	120,652	15,715	7.68
		1915	1,273,956	32,601	39.07
6	Claresholm	1914	636,731	68,296	9.32
		1915	2,957,720	81,391	36.33
7	Nanton	1914	562,640	47,311	11.89
		1915	2,416,352	62,397	38.72
8	Little Bow	1914	1,535,005	127,898	12.00
		1915	5,623,069	128,886	43.62
9	Taber	1914	364,473	60,169	6.06
		1915	6,199,758	162,240	38.21
10	Redcliff	1914	93,675	13,464	6.95
		1915	2,655,247	61,009	43.52
11	Bow Valley	1914	331,246	23,756	13.94
		1915	1,836,724	47,302	38.82
12	Gleichen	1914	588,810	36,570	16.10
		1915	1,889,751	48,705	38.79
13	High River	1914	269,536	16,022	16.82
		1915	1,129,795	28,154	40.12
14	Okotoks	1914	162,263	10,117	16.03
		1915	685,507	20,544	33.36
15	Rocky Mountain	1914	9,531	598	15.94
		1915	10,020	338	29.68
16	Calgary	1914	3,426	141	24.30
		1915	22,144	491	45.09
17	Cochrane	1914	108,661	6,495	16.73
		1915	158,235	2,822	56.07
18	Didsbury	1914	293,310	16,574	17.70
		1915	1,100,261	28,164	39.06
19	Hand Hills	1914	510,529	34,630	14.74
		1915	2,427,177	103,531	23.44
20	Acadia	1914	233,867	26,366	8.87
		1915	3,692,008	91,388	40.39
21	Coronation	1914	610,290	43,761	13.95
		1915	2,713,748	77,301	35.11
22	Stettler	1914	977,661	43,531	22.46
		1915	1,887,749	60,310	31.39
23	Olds	1914	173,334	9,258	18.73
		1915	309,247	9,390	32.93
24	Innisfail	1914	48,914	2,370	20.63
		1915	105,077	3,311	31.74
25	Red Deer	1914	153,741	6,542	23.50
		1915	167,092	5,853	28.55
26	Lacombe	1914	294,712	12,237	24.08
		1915	429,695	15,161	28.34
27	Ponoka	1914	107,749	4,412	24.42
		1915	139,455	5,296	26.33
28	Wetaskiwin	1914	249,437	9,710	25.69
		1915	249,438	8,323	29.97
29	Camrose	1914	409,699	16,845	24.32
		1915	795,952	28,519	27.81
30	Sedgewick	1914	1,425,874	58,353	24.44
		1915	2,704,669	80,998	33.39

SPRING WHEAT—*Continued.*

No	Crop District	Year	Bushels	Acreage	Yield per Acre.
31	Ribstone	1914	709,157	41,222	17.20
		1915	2,654,201	74,298	35.73
32	Wainwright	1914	438,163	21,715	20.18
		1915	1,405,884	43,156	32.58
33	Alexandra	1914	508,557	24,786	20.52
		1915	942,060	20,770	45.35
34	Vermilion	1914	357,757	17,493	20.43
		1915	563,136	17,575	32.04
35	Vegreville	1914	524,900	22,479	23.35
		1915	623,575	22,440	26.64
36	South Edmonton	1914	133,728	5,167	25.88
		1915	234,689	8,334	28.16
37	Leduc	1914	126,413	5,605	22.55
		1915	184,112	7,260	25.36
38	Stony Plain	1914	122,033	5,990	20.37
		1915	111,029	4,914	22.59
39	Edson	1914	12,913	536	24.09
		1915	12,161	342	35.56
40	Lac Ste. Anne	1914	25,548	1,236	20.67
		1915	40,157	1,745	23.01
41	Pembina	1914	101,378	6,056	16.74
		1915	107,390	5,026	21.37
42	St. Albert	1914	29,466	1,298	22.70
		1915	63,037	2,026	31.11
43	Sturgeon	1914	201,288	7,006	28.73
		1915	240,855	10,135	22.03
44	Victoria	1914	416,029	15,298	27.19
		1915	458,165	15,120	30.30
44	Whitford	1914	147,967	5,967	24.80
		1915	358,240	12,772	28.05
46	Beaver River	1914	85,250	3,654	23.33
		1915	91,415	2,905	31.46
47	St. Paul	1914	91,975	3,760	24.46
		1915	96,672	3,544	27.27
48	Clearwater	1914	2,052	108	19.00
		1915	3,091	120	25.76
49	Athabasca	1914	41,170	1,709	24.09
		1915	49,421	2,471	20.00
50	Grouard	1914	27,079	1,050	25.79
		1915	32,265	1,005	32.10
51	Peace River	1914	193,101	8,741	22.09
		1915	247,312	8,248	29.98
52	Lethbridge	1914	5,411	858	6.31
		1915	291,757	6,689	43.62
	Indian Reserves	1914	6,295	297	21.16
		1915	83,609	3,702	22.58

WINTER WHEAT.

No	Crop District	Year	Bushels	Acreage	Yield per Acre.
1	Medicine Hat	1914	7,354	585	12.58
		1915	14,526	314	46.26
2	Warner	1914	10,948	1,400	7.82
		1915	120,769	2,049	58.94
3	Cardston	1914	244,117	14,831	16.46
		1915	270,756	8,312	32.57
4	Pincher Creek	1914	173,996	10,991	15.83
		1915	403,669	9,712	41.66
5	Macleod	1914	60,474	2,690	22.48
		1915	76,227	2,228	34.21
6	Claresholm	1914	17,926	1,057	16.96
		1915	25,417	614	41.39
7	Nanton	1914	73,261	4,317	16.97
		1915	13,679	360	37.99
8	Little Bow	1914	9,422	341	27.63
		1915	9,614	259	37.11
9	Taber	1914	5,099	325	15.69
		1915	13,809	308	44.83
10	Redcliff	1914	75	5	15.00
		1915	40,279	918	43.87
11	Bow Valley	1914	524	30	17.47
		1915	1,470	70	21.00
12	Gleichen	1914	13,787	1,214	11.36
		1915	75,542	1,581	47.70
13	High River	1914	17,996	1,170	15.38
		1915	4,410	97	45.46
14	Okotoks	1914	16,633	927	17.94
		1915	10,134	227	44.64
15	Rocky Mountain	1914	12,298	785	15.67
		1915	25,930	716	36.21
16	Calgary	1914	500	20	25.00
		1915	495	15	33.00
17	Cochrane	1914	2,508	175	14.33
		1915	16,825	432	38.94
18	Didsbury	1914	13,387	703	19.04
		1915	15,654	467	33.52
19	Hand Hills	1914	3,791	332	11.42
		1915	9,329	242	38.54
20	Acadia	1914	4,108	699	5.87
		1915	160	5	32.00
21	Coronation	1914	10,941	798	13.71
		1915	4,337	131	33.11
22	Stettler	1914	15,932	608	26.20
		1915	.....	.....	.....
23	Olds	1914	10,545	428	24.64
		1915	52,057	1,273	40.87
24	Innisfail	1914	1,887	115	16.41
		1915	1,673	60	27.88
25	Red Deer	1914	5,917	252	23.48
		1915	14,384	444	32.39
26	Lacombe	1914	12,415	461	26.93
		1915	3,499	112	31.24
27	Ponoka	1914	1,683	110	15.30
		1915	4,168	133	31.34
28	Wetaskiwin	1914	3,782	198	19.10
		1915	543	28	19.39
29	Camrose	1914	5,715	219	26.10
		1915	.....	.....	.....
30	Sedgewick	1914	13,467	530	25.41
		1915	.....	.....	.....
31	Ribstone	1914	33,875	1,999	16.95
		1915	.....	.....	.....

WINTER WHEAT—*Continued.*

No	Crop District	Year	Bushels	Acreage	Yield per Acre.
32	Wainwright	1914	4,806	300	16.00
		1915	3,542	119	29.76
33	Alexandra	1914	.....	....	.....
		1915	.....	....	.....
34	Vermilion	1914	4,523	241	18.77
		1915	308	11	28.00
35	Vegreville	1914	10,056	425	23.61
		1915	.....	....	.....
36	South Edmonton	1914	2,940	127	23.15
		1915	2,680	67	40.00
37	Leduc	1914	1,596	67	23.82
		1915	753	26	28.96
38	Stony Plain	1914	1,343	80	16.79
		1915	56	3	18.67
39	Edson	1914	.....	....	.....
		1915	.....	....	.....
40	Lac Ste. Anne	1914	260	12	21.66
		1915	42	6	7.00
41	Pembina	1914	2,629	107	24.57
		1915	364	19	19.16
42	St. Albert	1914	704	25	28.16
		1915	43	4	10.75
43	Sturgeon	1914	1,525	69	12.10
		1915	.....	....	.....
44	Victoria	1914	666	33	20.18
		1915	216	7	30.86
45	Whitford	1914	.....	....	.....
		1915	.....	....	.....
46	Beaver River	1914	.....	....	.....
		1915	.....	....	.....
47	St. Paul	1914	.....	....	.....
		1915	.....	....	.....
48	Clearwater	1914	.....	....	.....
		1915	.....	....	.....
49	Athabasca	1914	500	20	25.00
		1915	437	18	24.28
50	Grouard	1914	414	15	27.60
		1915	140	3	46.67
51	Peace River	1914	360	20	18.00
		1915	1,302	21	62.00
52	Lethbridge	1914	525	75	7.00
		1915	.....	....	.....
	Indian Reserves	1914	.....	....	.....
		1915	18,767	542	34.62

OATS.

No	Crop District	Year	Bushels	Acreage	Yield per Acre.
1	Medicine Hat	1914	36,309	5,114	7.10
		1915	1,340,790	17,049	78.64
2	Warner	1914	9,432	1,258	7.50
		1915	808,218	11,931	67.74
3	Cardston	1914	268,775	12,661	21.23
		1915	805,038	14,737	54.62
4	Pincher Creek	1914	232,409	10,140	22.92
		1915	465,472	9,382	49.61
5	Macleod	1914	28,872	2,064	13.98
		1915	708,709	10,442	67.87
6	Claresholm	1914	171,113	12,396	13.81
		1915	1,084,941	16,521	65.67
7	Nanton	1914	594,870	30,660	19.40
		1915	2,863,278	41,780	68.73
8	Little Bow	1914	241,152	12,663	19.04
		1915	2,721,196	35,260	77.11
9	Taber	1914	297,740	13,803	21.57
		1915	3,044,907	44,711	68.10
10	Redcliff	1914	54,280	4,600	11.80
		1915	2,318,292	32,425	71.49
11	Bow Valley	1914	438,943	17,103	19.86
		1915	1,703,526	23,607	72.16
12	Gleichen	1914	2,080,524	73,923	28.14
		1915	6,025,931	87,019	69.24
13	High River	1914	1,777,868	66,539	26.72
		1915	5,117,818	78,614	65.10
14	Okotoks	1914	754,124	26,051	28.95
		1915	2,123,300	31,600	67.19
15	Rocky Mountain	1914	63,929	1,797	35.57
		1915	81,392	2,156	37.75
16	Calgary	1914	202,358	6,349	31.87
		1915	361,525	7,402	48.84
17	Cochrane	1914	501,424	16,268	30.82
		1915	872,390	15,738	55.43
18	Didsbury	1914	1,390,128	48,953	28.40
		1915	4,130,345	72,549	56.93
19	Hand Hills	1914	566,274	28,775	19.68
		1915	3,683,182	52,435	70.24
20	Acadia	1914	93,547	11,482	8.15
		1915	2,295,797	34,869	65.84
21	Coronation	1914	811,226	36,591	22.17
		1915	3,097,731	53,626	57.76
22	Stettler	1914	1,403,860	40,796	34.41
		1915	2,785,205	50,013	55.68
23	Olds	1914	1,085,141	32,027	33.88
		1915	2,490,183	57,561	43.26
24	Innisfail	1914	674,700	22,416	30.10
		1915	1,485,086	29,121	50.99
25	Red Deer	1914	592,994	16,643	35.63
		1915	1,263,681	26,631	47.45
26	Lacombe	1914	977,079	26,442	36.95
		1915	2,022,979	40,711	49.69
27	Ponoka	1914	931,818	26,181	35.59
		1915	1,376,981	30,322	45.41
28	Wetaskiwin	1914	835,615	34,272	24.38
		1915	1,357,561	31,345	43.31
29	Camrose	1914	1,907,810	52,103	36.62
		1915	4,938,976	81,629	49.48
30	Sedgewick	1914	1,536,436	43,222	35.55
		1915	3,798,511	65,571	57.93
31	Ribstone	1914	716,444	27,008	26.53
		1915	2,145,111	34,960	61.36

OATS—Continued.

No	Crop District	Year	Bushels	Acreage	Yield per Acre.
32	Wainwright	1914	942,147	27,169	34.67
		1915	2,717,459	39,761	68.34
33	Alexandra	1914	930,466	25,990	35.80
		1915	2,441,991	35,520	68.75
34	Vermilion	1914	638,278	25,862	24.68
		1915	1,470,898	23,623	62.27
35	Vegreville	1914	1,716,438	45,616	37.63
		1915	2,332,552	46,288	50.40
36	South Edmonton	1914	1,001,825	25,681	39.01
		1915	1,390,375	26,054	53.37
37	Leduc	1914	455,161	22,163	20.54
		1915	1,158,673	28,337	40.89
38	Stony Plain	1914	818,847	25,469	32.15
		1915	1,015,106	25,004	40.61
39	Edson	1914	36,002	1,124	32.03
		1915	88,080	1,791	49.18
40	Lac Ste. Anne	1914	122,065	4,707	25.93
		1915	462,468	11,108	41.63
41	Pembina	1914	419,914	16,187	25.94
		1915	595,518	14,907	39.95
42	St. Albert	1914	771,395	21,614	35.69
		1915	986,299	24,125	40.88
43	Sturgeon	1914	1,222,635	29,439	41.53
		1915	1,467,368	31,479	46.61
44	Victoria	1914	1,351,409	33,958	39.80
		1915	1,590,595	32,365	49.11
45	Whitford	1914	661,386	17,376	38.06
		1915	1,209,827	26,494	45.67
46	Beaver River	1914	342,797	10,713	31.99
		1915	445,688	9,572	46.56
47	St. Paul	1914	496,535	14,263	34.82
		1915	646,554	14,487	44.63
48	Clearwater	1914	46,633	1,793	26.01
		1915	67,907	1,635	41.53
49	Athabasca	1914	82,290	2,598	27.82
		1915	97,355	3,004	32.41
50	Grouard	1914	13,351	4,399	48.50
		1915	195,278	3,071	63.59
51	Peace River	1914	960,915	26,237	36.06
		1915	1,333,868	18,187	73.34
52	Lethbridge	1914	4,183	560	7.47
		1915	269,160	9,126	29.49
	Indian Reserves	1914	85,637	3,408	25.13
		1915	161,618	3,931	41.11

BARLEY.

No	Crop District	Year	Bushels	Acreage	Yield per Acre.
1	Medicine Hat	1914	3,871	805	4.80
		1915	148,912	3,550	41.94
2	Warner	1914	2,919	721	4.05
		1915	151,856	3,709	40.94
3	Cardston	1914	74,649	5,111	14.60
		1915	199,668	5,372	37.16
4	Pincher Creek	1914	49,833	3,401	14.65
		1915	65,168	2,382	27.35
5	Macleod	1914	9,920	1,053	9.42
		1915	28,114	668	42.08
6	Claresholm	1914	46,784	4,147	11.28
		1915	81,776	2,115	38.66
7	Nanton	1914	34,810	3,293	10.57
		1915	131,688	3,519	37.42
8	Little Bow	1914	54,726	4,255	12.86
		1915	325,492	6,852	47.50
9	Taber	1914	42,737	2,845	15.02
		1915	319,288	7,315	43.64
10	Redcliff	1914	9,930	1,000	9.30
		1915	167,190	3,628	46.08
11	Bow Valley	1914	24,166	2,131	11.34
		1915	138,188	3,607	38.31
12	Gleichen	1914	357,136	21,629	16.51
		1915	823,120	23,759	34.64
13	High River	1914	152,004	10,713	14.19
		1915	331,804	8,969	36.99
14	Okotoks	1914	147,173	7,563	19.46
		1915	194,766	5,524	35.25
15	Rocky Mountain	1914	16,685	569	29.32
		1915	2,646	78	33.92
16	Calgary	1914	36,181	1,493	24.23
		1915	37,834	1,062	35.62
17	Cochrane	1914	205,119	9,104	22.64
		1915	238,228	7,193	33.11
18	Didsbury	1914	359,419	17,073	21.04
		1915	702,834	20,009	35.13
19	Handhills	1914	107,927	8,460	12.76
		1915	195,448	6,307	30.98
20	Acadia	1914	12,979	2,472	5.25
		1915	115,586	3,064	37.72
21	Coronation	1914	154,839	11,288	13.72
		1915	243,530	7,047	34.55
22	Stettler	1914	336,870	15,974	22.35
		1915	459,816	14,471	31.79
23	Olds	1914	207,899	8,943	23.25
		1915	376,468	10,195	36.93
24	Innisfail	1914	148,948	6,572	22.52
		1915	230,522	8,824	26.23
25	Red Deer	1914	280,123	6,466	43.32
		1915	307,238	8,887	34.57
26	Lacombe	1914	399,614	14,164	28.21
		1915	642,157	19,298	33.28
27	Ponoka	1914	244,820	9,078	26.96
		1915	288,756	8,956	32.24
28	Wetaskiwin	1914	242,099	8,510	28.45
		1915	391,528	11,268	34.75
29	Camrose	1914	335,098	12,311	27.22
		1915	499,994	15,847	31.55
30	Sedgewick	1914	341,687	13,377	25.54
		1915	523,084	15,310	34.17
31	Ribstone	1914	179,277	11,240	15.95
		1915	212,906	6,147	34.64

BARLEY—*Continued.*

No	Crop District	Year	Bushels	Acreage	Yield per Acre.
32	Wainwright	1914	219,825	8,571	25.65
		1915	333,318	7,757	42.97
33	Alexandra	1914	172,079	6,894	24.96
		1915	281,164	6,952	40.44
34	Vermilion	1914	174,363	7,059	24.70
		1915	250,972	8,669	28.95
35	Vegreville	1914	246,335	9,730	25.32
		1915	295,926	10,210	28.98
36	South Edmonton	1914	364,637	11,164	32.66
		1915	348,684	10,027	34.77
37	Leduc	1914	176,954	7,016	25.22
		1915	326,662	10,356	31.54
38	Stony Plain	1914	204,782	7,670	26.70
		1915	160,524	5,705	28.14
39	Edson	1914	22,309	1,067	30.28
		1915	79,808	2,307	34.59
40	Lac Ste. Anne	1914	27,427	1,231	22.28
		1915	105,240	4,523	23.29
41	Pembina	1914	62,459	3,369	18.54
		1915	1 1,036	4,064	29.78
42	St. Albert	1914	183,658	6,167	29.78
		1915	212,228	6,259	33.91
43	Sturgeon	1914	315,112	9,566	32.94
		1915	267,200	8,970	29.79
44	Victoria	1914	447,874	13,996	32.00
		1915	590,630	18,868	31.30
45	Whitford	1914	216,123	7,565	28.56
		1915	360,432	11,703	30.79
46	Beaver River	1914	90,992	3,401	26.76
		1915	92,458	2,812	32.88
47	St. Paul	1914	100,565	3,799	26.47
		1915	103,528	3,552	29.15
48	Clearwater	1914	48,420	1,675	28.89
		1915	29,922	1,089	27.47
49	Athabasca	1914	24,855	1,274	19.51
		1915	17,738	701	25.30
50	Grouard	1914	24,365	1,106	22.03
		1915	18,350	488	37.58
51	Peace River	1914	84,033	3,336	25.19
		1915	89,412	2,969	30.12
52	Lethbridge	1914	843	100	8.43
		1915	31,138	729	42.71
	Indian Reserves	1914	9,285	374	24.83
		1915	9,112	418	21.80

FLAX

No	Crop District	Year	Bushels	Acreage	Yield per Acre.
1	Medicine Hat	1914	4,297	3,331	1.29
		1915	84,206	6,655	12.66
2	Warner	1914	4,965	1,962	2.53
		1915	54,845	3,512	15.40
3	Cardston	1914	4,492	919	4.89
		1915	4,744	301	15.70
4	Pincher Creek	1914	3,608	766	4.71
		1915	2,364	147	16.08
5	Macleod	1914	1,438	324	4.44
		1915	1,927	84	22.13
6	Claresholm	1914	1,050	150	7.00
		1915	2,094	83	25.23
7	Nanton	1914	923	100	9.23
		1915	.....	.....	.....
8	Little Bow	1914	13,305	3,858	3.45
		1915	29,427	1,585	18.56
9	Taber	1914	1,005	324	3.10
		1915	81,109	6,120	13.25
10	Redcliff	1914	701	317	2.21
		1915	112,317	7,858	14.29
11	Bow Valley	1914	11,746	1,832	6.41
		1915	19,782	1,362	14.52
12	Gleichen	1914	24,504	3,713	6.60
		1915	24,685	1,618	15.26
13	High River	1914	850	100	8.50
		1915	8,225	481	17.08
14	Okotoks	1914	1,902	218	8.73
		1915	.....	.....	.....
15	Rocky Mountain	1914	.....	.....	.....
		1915	.....	.....	.....
16	Calgary	1914	1,200	100	12.00
		1915	.....	.....	.....
17	Cochrane	1914	1,500	150	10.00
		1915	2,434	188	12.95
18	Didsbury	1914	6,080	671	9.06
		1915	6,411	265	24.19
19	Handhills	1914	19,617	4,863	4.03
		1915	38,595	3,180	12.11
20	Acadia	1914	3,743	1,412	2.65
		1915	54,304	4,343	12.50
21	Coronation	1914	17,598	4,066	4.33
		1915	8,560	753	11.37
22	Stettler	1914	9,974	1,399	7.13
		1915	1,836	171	10.73
23	Olds	1914	5,804	1,089	5.33
		1915	719	58	12.39
24	Innisfail	1914	.....	.....	.....
		1915	179	18	9.95
25	Red Deer	1914	.....	.....	.....
		1915	.....	.....	.....
26	Lacombe	1914	1,258	85	14.80
		1915	735	70	10.50
27	Ponoka	1914	170	30	5.66
		1915	37	3	12.33
28	Wetaskiwin	1914	108	12	9.00
		1915	.....	.....	.....
29	Camrose	1914	6,815	600	11.36
		1915	2,909	246	11.82
30	Sedgewick	1914	2,565	220	11.66
		1915	1,554	154	10.09
31	Ribstone	1914	21,726	4,509	4.82
		1915	8,771	812	10.80

FLAX—*Continued.*

No	Crop District	Year	Bushels	Acreage	Yield per Acre.
32	Wainwright	1914	19,358	2,757	7.02
		1915	4,439	328	13.54
33	Alexandra	1914	12,485	1,530	8.16
		1915	2,413	155	15.56
24	Vermilion	1914	404	37	10.91
		1915	447	42	10.64
25	Vegreville	1914	1,281	136	9.42
		1915	908	64	14.19
36	South Edmonton	1914	86	6	14.33
		1915	105	9	11.67
37	Leduc	1914	.....	.....	.....
		1915	.....	.....	.....
38	Stony Plain	1914	11	2	5.50
		1915	.....	.....	.....
39	Edson	1914	.....	.....	.....
		1915	84	7	12.00
40	Lac Ste. Anne	1914	.....	.....	.....
		1915	.....	.....	.....
41	Pembina	1914	30	12	2.50
		1915	184	17	10.82
42	St. Albert	1914	.....	.....	.....
		1915	18	1	18.00
43	Sturgeon	1914	17	2	8.50
		1915	.....	.....	.....
44	Victoria	1914	30	2	15.00
		1915	61	5	12.30
45	Whitford	1914	18	2	9.00
		1915	.....	.....	.....
46	Beaver River	1914	.....	.....	.....
		1915	.....	.....	.....
47	St. Paul	1914	.....	.....	.....
		1915	.....	.....	.....
48	Clearwater	1914	.....	.....	.....
		1915	.....	.....	.....
49	Athabasca	1914	.....	.....	.....
		1915	.....	.....	.....
50	Grouard	1914	.....	.....	.....
		1915	.....	.....	.....
51	Peace River	1914	450	50	9.00
		1915	2,484	210	11.82
52	Lethbridge	1914	.....	.....	.....
		1915	5,850	396	14.77
	Indian Reserves	1914	.....	.....	.....
		1915	.....	.....	.....

SPELTZ

No	Crop District	Year	Bushels	Acreage	Yield per Acre.
1	Medicine Hat	1914	812	100	8.12
		1915	.....	.....	.....
2	Warner	1914	420	70	6.00
		1915	2,808	115	24.14
3	Cardston	1914	521	25	20.84
		1915	.....	.....	.....
4	Pincher Creek	1914	414	30	13.80
		1915	.....	.....	.....
5	Macleod	1914	150	10	15.00
		1915	.....	.....	.....
6	Claresholm	1914	498	35	14.23
		1915	294	10	29.40
7	Nanton	1914	185	12	15.42
		1915	286	12	23.83
8	Little Bow	1914	684	65	10.52
		1915	1,512	42	36.00
9	Taber	1914	494	50	9.88
		1915	2,014	115	17.51
10	Redcliff	1914	290	35	8.29
		1915	1,071	30	35.70
11	Bow Valley	1914	342	23	14.87
		1915	3,882	51	76.12
12	Gleichen	1914	3,093	116	26.67
		1915	5,304	147	36.08
13	High River	1914	2,100	80	26.25
		1915	380	9	42.02
14	Okotoks	1914	1,275	75	17.00
		1915	.....	.....	.....
15	Rocky Mountain	1914	.....	.....	.....
		1915	.....	.....	.....
16	Calgary	1914	257	12	21.42
		1915	.....	.....	.....
17	Cochrane	1914	1,170	52	22.50
		1915	181	5	36.20
18	Didsbury	1914	1,234	41	30.10
		1915	310	21	14.76
19	Handhills	1914	544	50	10.89
		1915	4,330	121	35.78
20	Acadia	1914	277	28	9.89
		1915	3,125	112	27.90
21	Coronation	1914	309	23	13.43
		1915	134	3	44.69
22	Stettler	1914	881	37	23.81
		1915	2,541	70	36.30
23	Olds	1914	724	43	16.84
		1915	55	2	27.50
24	Innisfail	1914	2,287	87	26.29
		1915	718	13	55.23
25	Red Deer	1914	982	50	19.64
		1915	108	9	12.00
26	Lacombe	1914	922	37	24.92
		1915	100	3	33.33
27	Ponoka	1914	713	33	21.60
		1915	.....	.....	.....
28	Wetaskiwin	1914	2,673	127	21.05
		1915	.....	.....	.....
29	Camrose	1914	1,411	39	36.18
		1915	89	3	29.67
30	Sedgewick	1914	797	48	16.61
		1915	283	9	31.44

SPELTZ—*Continued.*

No.	Crop District	Year	Bushels	Acreage	Yield per Acre.
31	Ribstone	1914	279	22	12.68
		1915	3,567	125	28.53
32	Wainwright	1914	788	67	11.76
		1915	.....	.....	.....
33	Alexandra	1914	1,858	69	26.93
		1915	2,889	81	35.66
34	Vermilion	1914	133	11	12.09
		1915	150	3	50.00
35	Vegreville	1914	1,732	55	31.50
		1915	704	19	37.05
36	South Edmonton	1914	.....	.....	.....
		1915	.....	.....	.....
37	Leduc	1914	691	34	20.32
		1915	.....	.....	.....
38	Stony Plain	1914	465	21	22.14
		1915	.....	.....	.....
39	Edson	1914	.....	.....	.....
		1915	960	32	30.00
40	Lac Ste. Anne	1914	437	23	19.00
		1915	27	2	13.50
41	Pembina	1914	608	54	11.26
		1915	50	2	25.00
42	St. Albert	1914	485	23	21.10
		1915	404	9	44.89
43	Sturgeon	1914	474	22	21.55
		1915	.....	.....	.....
44	Victoria	1914	867	37	23.43
		1915	.....	.....	.....
45	Whitford	1914	238	13	20.00
		1915	.....	.....	.....
46	Beaver River	1914	378	17	22.23
		1915	245	11	22.27
47	St. Paul	1914	842	34	24.76
		1915	231	8	28.87
48	Clearwater	1914	.....	.....	.....
		1915	.....	.....	.....
49	Athabasca	1914	.....	.....	.....
		1915	.....	.....	.....
50	Grouard	1914	850	49	17.35
		1915	.....	.....	.....
51	Peace River	1914	.....	.....	.....
		1915	.....	.....	.....
52	Lethbridge	1914	314	41	7.66
		1915	.....	.....	.....
	Indian Reserves	1914	.....	.....	.....
		1915	.....	.....	.....

RYE

No	Crop District	Year	Bushels	Acreage	Yield per Acre.
1	Medicine Hat	1914	510	102	5.00
		1915	17,750	510	35.00
2	Warner	1914	531	150	3.54
		1915	4,812	141	34.10
3	Cardston	1914	155	10	15.50
		1915	1,211	44	27.52
4	Pincher Creek	1914	1,265	115	11.00
		1915	.....	.....	.....
5	Macleod	1914	1,394	95	14.67
		1915	4,654	165	28.02
6	Claresholm	1914	1,647	109	15.11
		1915	2,430	88	27.62
7	Nanton	1914	1,348	140	9.63
		1915	2,784	124	22.46
8	Little Bow	1914	1,826	112	16.30
		1915	2,380	128	18.51
9	Taber	1914	1,220	135	9.04
		1915	9,255	301	30.75
10	Redcliff	1914	2,801	230	12.18
		1915	2,277	84	27.10
11	Bow Valley	1914	4,249	437	9.73
		1915	389	17	22.88
12	Gleichen	1914	9,294	758	12.26
		1915	13,826	505	27.39
13	High River	1914	14,543	685	21.23
		1915	10,048	427	23.53
14	Okotoks	1914	3,865	172	22.47
		1915	4,579	169	27.09
15	Rocky Mountain	1914	419	20	20.95
		1915	.....	.....	.....
16	Calgary	1914	342	19	18.00
		1915	1,420	63	22.54
17	Cochrane	1914	17,873	812	22.01
		1915	7,820	357	21.90
18	Didsbury	1914	63,853	3,321	19.23
		1915	60,510	2,803	21.59
19	Handhills	1914	2,041	157	13.00
		1915	12,288	584	21.04
20	Acadia	1914	1,602	110	14.56
		1915	7,091	454	15.70
21	Coronation	1914	2,205	126	17.50
		1915	5,514	129	42.74
22	Stettler	1914	10,126	671	15.09
		1915	28,283	835	33.87
23	Olds	1914	9,165	458	20.01
		1915	16,555	779	21.25
24	Innisfail	1914	4,844	222	21.82
		1915	1,350	56	24.10
25	Red Deer	1914	8,085	462	17.50
		1915	2,189	116	18.87
26	Lacombe	1914	7,736	438	17.66
		1915	15,288	667	22.92
27	Ponoka	1914	17,972	937	19.18
		1915	10,489	627	16.72
28	Wetaskiwin	1914	4,310	209	20.62
		1915	4,731	267	17.71
29	Camrose	1914	5,604	208	26.94
		1915	2,069	93	22.24
30	Sedgewick	1914	7,903	258	30.53
		1915	12,008	379	31.68

Rye—*Continued.*

No	Crop District	Year	Bushels	Acreage	Yield per Acre.
31	Ribstone	1914	1,575	103	15.00
		1915	4,430	179	24.75
32	Wainwright	1914	2,808	128	21.94
		1915	9,194	347	26.49
33	Alexandra	1914	915	61	15.00
		1915	2,277	74	30.77
34	Vermilion	1914	3,047	205	14.86
		1915	1,563	60	26.05
35	Vegreville	1914	3,613	140	25.81
		1915	2,248	93	24.17
36	South Edmonton	1914	2,053	81	25.35
		1915	1,460	76	19.21
37	Leduc	1914	1,770	88	21.25
		1915	476	28	17.00
38	Stony Plain	1914	2,790	129	21.63
		1915	281	12	23.41
39	Edson	1914	6,092	260	23.43
		1915	429	11	39.00
40	Lac Ste. Anne	1914	1,875	97	19.33
		1915	8	1	8.00
41	Pembina	1914	6,314	451	14.00
		1915	.....	.....	.....
42	St. Albert	1914	1,485	71	20.92
		1915	.....	.....	.....
43	Sturgeon	1914	6,279	364	17.25
		1915	133	8	16.62
44	Victoria	1914	1,530	129	11.86
		1915	1,448	74	19.56
45	Whitford	1914	300	19	15.79
		1915	1,127	70	16.10
46	Beaver River	1914	2,196	89	24.67
		1915	1,285	55	23.36
47	St. Paul	1914	2,692	123	21.89
		1915	877	58	15.12
48	Clearwater	1914	860	40	21.50
		1915	50	4	12.50
49	Athabasca	1914	1,838	140	13.13
		1915	38	2	19.00
50	Grouard	1914	2,421	133	18.20
		1915	.....	.....	.....
51	Peace River	1914	.....	.....	.....
		1915	.....	.....	.....
52	Lethbridge	1914	662	92	7.20
		1915	75	3	25.00
	Indian Reserves	1914	.....	.....	.....
		1915	.....	.....	.....

Respectfully submitted,

CHARLES S. HOTCHKISS,

Statistician.

PUBLICITY AND IMMIGRATION

SIR,—I beg to submit herewith a report of the Publicity Bureau for the year 1915.

During the past immigration season, April to October, the decline in immigration to Canada as compared with the previous season, was 74 per cent. In 1914 the decrease was 61 per cent., as compared with 1913. This is a natural consequence of the war and to a small extent of internal conditions here. That despite the war in the seven months immigration season this year we received new population to the number of about 20,000 through that channel, is a matter of satisfaction. Of that total about 15,000 came from the United States. Allowing cash of \$500 and settlers' effects valued at \$350 per head, conceded by the immigration authorities to be a very fair average estimate, these 15,000 settlers have brought into the country a sum of nearly \$12,750,000, but the value of the immigrant is not alone in the money he brings. He has additional and higher value as an active citizen, an additional producer of wealth and a unit of purchasing power.

With the outbreak of war and the consequent disorganization of the Atlantic Steamship Service, immigration to Canada from the Mother Country and Continental Europe has practically ceased. Between April and October this year the British immigrant arrivals numbered 7,185, and the arrivals from other countries 1,992.

HOMESTEAD ENTRIES.

During the past year 6,418 homestead, 564 pre-emptions and 84 purchased homestead entries were made in Alberta, thus alienating 1,130,560 acres of Crown lands. In previous years the unsubstantial attractions of the towns and cities have been drawing young men from the country in large numbers. The centres of population likewise have caught and held too large a proportion of foreign immigrants. Agriculture has thus been made increasingly difficult for want of farm labor, and congestion in the towns has made more perplexing the problem of living there. Now happily the trend is swinging in the other direction. Bitter experience has taught many their lesson. It is estimated that fully one half of the homestead entries made in Alberta during the past year were made by men from our own towns and cities. The "back to the land" movement has at last become a practical reality.

During the early part of the year the writer visited the State of California, and found it a very good source of supply for settlers; in fact we were able to place a considerable number upon lands in the Province during the year, and expect a still greater number of settlers during the coming year. Our Commissioner at Winnipeg also spent the early part of the year in Ontario, visiting farm districts with a view to securing settlers, and found many who were attracted by the opportunities afforded in the Province for real farmers. A feature of June, July and August was the number of American people calling here on their way to and from the Panama Exposition. Many wealthy tourists made the trip through Canada a substitute for the European trip.

The prospects for increased immigration are exclusively in the South, as we cannot under present circumstances expect settlers in any numbers from elsewhere. To that end it has been arranged to send a number of special commissioners into the United States early in the New Year.

TORONTO EXHIBITION.

Alberta never had such a welcome to the Canadian National Exhibition at Toronto as was given this year. This year visitors showered Alberta with congratulations on the bounty of the harvest. The main exhibit was a war picture moulded in butter, and to farmers it was a sight second only to the war relics placed nearby. This picture contained four hundred pounds of butter, which took seven days to mould by hand, and was kept firm by ice blocks behind. The picture was a composite one, and farm scenes were contrasted with representations of troops on the march and a dreadnaught battleship with a Zeppelin hovering over it. The Province never had a more attractive exhibit, or one that was more creditable or interesting.

HARVEST HELP.

For a number of years past it has been the custom to hold a conference in Winnipeg during the month of July between the three railways and the government officials of the three prairie Provinces to make arrangements for the supply of farm labor for the harvest season. Special rates are given annually by the railway companies to induce eastern men to come west for this work. The trip also affords opportunity for the farmers of the east to personally visit the west and judge of its resources and possibilities.

With the exception of last year, Alberta received from five to fifteen thousand harvest help annually from outside sources. No outside assistance was necessary last year on account of using farmers from the district where the drouth shortened, and in a considerable area wholly destroyed, the crop. In the present year arrangements were made with the military authorities to use the soldiers in training at Sarsce Camp. There were brought in also over one hundred specially selected men from Vancouver, B.C., late in the season, to fill the places of soldiers who returned early for camp duties.

A special feature in the movement of harvest help this year was the great number of homesteaders from the northern part of the Province who arranged after taking care of their own harvest to assist elsewhere.

In conclusion, we are pleased to record the continued co-operation of the different local organizations throughout the State, and likewise of the Press.

I have the honor to remain,

Your obedient servant,

C. S. HOTCHKISS,
Chief Publicity Commissioner.

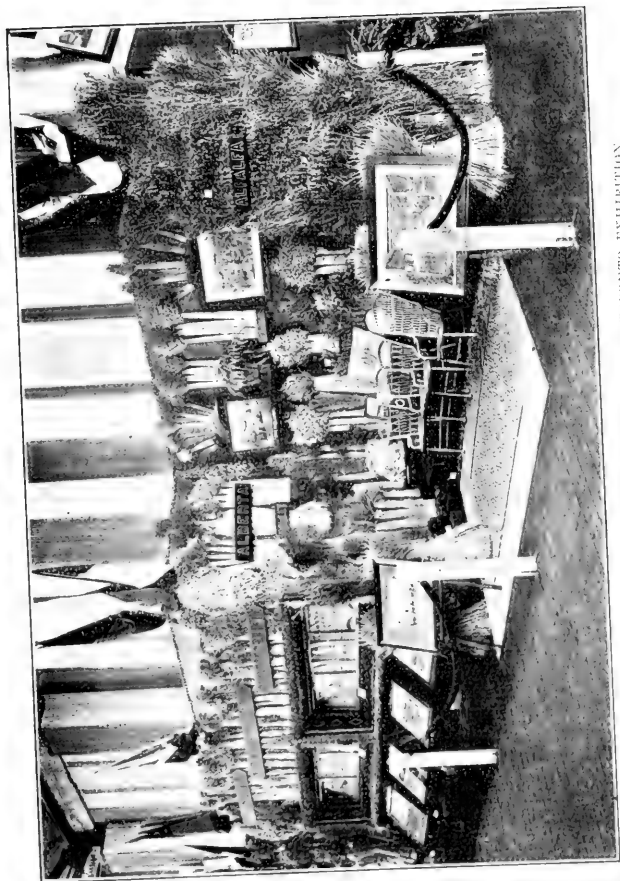


EXHIBIT OF DEPARTMENT OF AGRICULTURE AT TORONTO EXHIBITION



REPORT OF THE PROVINCIAL SANITARY ENGINEER

SIR,—I have the honor to submit the annual report of the Provincial Sanitary Engineering Branch of the Department.

This Branch administers, on behalf of the Provincial Board of Health, those sections of the Public Health Act and Regulations dealing with water supply, sewerage, sewage disposal, drainage, refuse destruction, pollution of waters, plumbing, offensive trades, sanitation of health districts and generally all matters and things included in the science of Sanitary Engineering, and coming under the jurisdiction of the Provincial Board of Health. It examines all plans and specifications submitted to the Provincial Board and prepares and issues the Provincial Board of Health Certificates. It inspects on behalf of the Public Works Department all public institutions, and advises the Department as to the construction, operation and maintenance of their Sanitary Engineering works.

This Branch supplies the Public Utility Commission with the expert advice required by the Commission when dealing with applications from local authorities for permission to raise money by way of debenture or upon the security of stock, in connection with Sanitary Engineering works. It enquires into, and reports to the Board, and generally acts in an advisory capacity in respect to all such matters. It is intended that this Branch shall also supervise, on behalf of the Public Utility Commission, the expenditure of all moneys borrowed for Sanitary Engineering works, by a local authority, under the Public Utilities Act.

This Branch examines the plans for new hospitals, as required under the Hospitals Ordinance, and inspects the construction features of existing hospitals.

There has been submitted to the Provincial Board of Health during the year 1915, fifteen sets of plans and specifications for waterworks, sewerage and sewage disposal works, for which certificates have been issued; several necessary sets of plans and specifications preliminary to these; a few sets for which certificates have not been issued by the Board; and many sets of plans and specifications for miscellaneous works for which the approval of the Provincial Sanitary Engineer alone is required.

The following is a detailed list of the works for which certificates have been issued by the Board, together with the estimated cost of each:

WATERWORKS AND WATER PURIFICATION.

Edmonton.

Certificate No. 104.—Extension to waterworks.	
Estimated Cost	\$648,160.00

Drumheller.

Certificate No. 110.—System of waterworks.	
Estimated Cost	14,736.00

Lethbridge.

Certificate No. 111.—Intake to waterworks.	
Estimated Cost	19,550.00

Total	\$682,446.00
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SEWERAGE AND SEWAGE DISPOSAL.

Red Deer.

Certificate No. 99.—System of sewerage.	
Estimated Cost	\$120,174.92

Beverly.

Certificate No. 103.—System of Temporary stormwater.	
Estimated Cost	13,000.00
(This may later become the permanent sanitary system if the application for such change submitted at that time be approved by the Board.)	

Calgary.

Certificate No. 105.—Extensions to Sewerage system.	
Estimated Cost	39,700.00
Certificate No. 106.—Extensions to Sewerage system.	
Estimated Cost	567.00
Certificate No. 107.—Extensions to Sewerage system.	
Estimated Cost	600.00
Certificate No. 108.—Extensions to Sewerage system.	
Estimated Cost	690,000.00

Edmonton.

Certificate No. 109.—System of Sewage disposal.	
Estimated Cost	50,000.00
(This certificate cancels No. 95, 1914.)	
Certificate No. 114.—Sewage disposal plant or plants.	
Estimated Cost	250,000.00
Certificate No. 116.—Extensions to Sewerage system.	
Estimated Cost	50,000.00
(Constructed in 1914 and 1915.)	

Edmonton Stockyards, Ltd., Edmonton.

Certificate No. 113.—System of Sewerage and Sewage disposal.	
Actual Cost	17,328.60

Wetaskiwin.

Certificate No. 112.—Extensions to Sewerage system.	
Estimated Cost	353.00

Dr. A. E. Archer (Acting on behalf of a syndicate of property owners), Lamont.

Certificate No. 115.—System of Sewage.	
Estimated Cost	
Total	\$2,775,838.41

TOTAL OF WATERWORKS, WATER PURIFICATION,
SEWERAGE AND SEWAGE DISPOSAL\$3,458,284.41

In connection with the foregoing works, an investigation on the site of the works was made in each case by the Provincial Sanitary Engineer before the certificate of the Provincial Board of Health was issued.

In connection with water supplies, sewerage and sewage disposal, refuse disposal, drainage and other sanitary engineering works, investigation of typhoid outbreaks, inspection of hospitals and public institutions and other miscellaneous matters, the writer visited the following places throughout the year, some of these two or three times as circumstances required:

Richdale	Coronation	Commerce
High River	Diamond City	Royal View
Veteran	Vermilion	Edmonton
Cooking Lake	Red Deer	Hanna
Lethbridge	Hardieville	Cardston
Ohaton	Sylvan Lake	Lougheed
Bassano	Drumheller	Beverly
Ft. Saskatchewan Jail	Coaldale	Ponoka Asylum
Lethbridge Jail	Cayley	Camrose
Edmonton Stockyards	Hardisty	Bremner
Stettler	Champion	Coalhurst
Pincher Creek	Lacombe	Lamont
Consort	Calgary	Langdon
Wetaskiwin	Macleod	

The water supplies of the Province require each year greater attention than they have required in the previous year. It is probably the most important work with which this Department has to deal, and as much time as possible is being devoted to it. On account of some of our officials having gone to the war, the office has been more or less short-handed during the year. It has been the aim to carry on the whole work as far as possible, and present health conditions indicate satisfactory work on the part of the Department. There is an increasing tendency on the part of our smaller towns and villages to instal sanitary works, and lack of capital alone prevents their beginning such. When present conditions change, great activity may be expected to occur in the smaller towns with regard to water installation and sewerage systems. Even in the dull year of 1915, the Provincial Board issued certificates for about three and a half million dollars. If we deduct the one and a half million for the City of Edmonton, we still have two millions spread over the other municipalities, not an inconsiderable amount under the circumstances.

In the future, the spending of unnecessarily large amounts by local authorities on sanitary works, can be more easily prevented than has been the case in the past, owing to the wide powers given to the Public Utility Commission in the new Public Utilities Act to control and supervise expenditures for public works. The work of the Provincial Board and that of the Public Utility Commission are complementary to each other, the former controlling the design, construction, maintenance, operation and approximate cost of sanitary works and the latter determining the question of the amount a local authority can afford to spend on any particular work and supervising the spending of the sum authorised.

The Provincial Sanitary Engineer is the technical adviser to the Provincial Board of Health; and in sanitary engineering matters is also the technical adviser to the Public Utility Commission. This arrangement appears to be a good one for the furtherance of the work of both bodies, and for the efficient and economical carrying out of the provisions of both Acts.

This year has shown a very important advance in the matter of improved methods of sewage disposal. The treatment of sewage by forced aeration in the presence of activated sludge is rapidly emerging from the promising to the established stage. The plants now working on this principle have continued during the winter to perform their work with but slight variations from normal, hence the critical period—the period of intense cold—has been safely passed. This is a very important fact, as a sewage disposal plant that cannot be operated almost as satisfactorily in

cold weather as in warm, is not a suitable one for Alberta. Of equal importance is the firm conviction of the experimenters that the process is economically practicable.

During the past year samples of water, etc., sent to the Provincial Laboratory have received much more careful and prompt attention than hitherto, and by reason of improved arrangements there it is now considered possible to commence this year a systematic water survey of the cities and towns of the Province, and after the larger places have been surveyed, to extend the work to the smaller ones as far as time will permit, this with a view to heading off possible outbreaks of typhoid, and generally to obtain information concerning our water supplies.

Data in connection with the present standing of the various cities, towns, etc., will be added to this report at a later date. It is not now available owing to the delay in the receipt of some of the annual reports.

The usual advisory and other routine work in connection with the Provincial Board, and the administration of the Public Health Act, has been duly attended to.

I have the honour to be, Sir,

Your obedient servant,

R. B. OWENS, B.A., B.E.,

Provincial Sanitary Engineer.

REPORT OF THE DIRECTOR OF THE PROVINCIAL LABORATORY

SIR,—I have the honor to submit the following report of the work of the Provincial Laboratory for the year 1915.

The Provincial Laboratory carries out most of the technical work of the Government in public health, medico-legal investigations, diseases of animals, and miscellaneous examinations. Public Health investigations relate to the diagnosis of some communicable diseases, the examination of water samples, and analysis of food, including milk. During 1915 examinations were made for the diagnosis of diphtheria, typhoid fever and pulmonary tuberculosis as shown in the following table:

SPECIMENS EXAMINED FOR THE DIAGNOSIS OF COMMUNICABLE DISEASES.

DISEASE	No. of Specimens	Results		Specimens sent from		Number of Specimens Received each Month				
		Neg.	Pos.	No. of Phys.	No. of S.P.O.S.	Mth.	Ty'd	Diph.	Sum	Total
Typhoid Fever.	122	94	28			Jan.	0	66	27	93
						Feb.	11	35	23	69
						Mar.	14	37	33	84
						Apr.	12	44	31	87
Diphtheria	521	389	132			May	12	63	22	94
						June	10	23	25	58
						July	13	31	17	61
						Aug.	8	18	22	46
Pulmonary Tuberculosis	315	237	78			Sept.	13	12	19	44
						Oct.	12	36	16	64
						Nov.	5	77	41	123
						Dec.	12	84	39	135
TOTAL	958	720	238	155	61		122	521	315	958

During the past year 315 specimens of sputum were received for examination. Some of these specimens have not been reported because the sender has neglected to give any information that would lead to his identification. Notwithstanding that there are data cards with every outfit, and that all information possible is requested, 181 of these specimens had no diagnosis given on the card. Of these 40 were found to contain the tubercle bacillus. A table has been made comparing the clinical diagnosis with the Laboratory findings, and is as follows:

COMPARISON BETWEEN CLINICAL DIAGNOSIS AND LABORATORY FINDINGS.

	Neg. Result with pos. diag.	Pos. Result with diag. other than T.B.	Pos. Result with pos. diag.	Pos. Result with no diag.	Neg. Result with diag. other than T.B.	Neg. Result with no diag.
January	7		2	1	6	11
February	7		1	8	2	5
March	9	1		1	7	15
April	6		6	3	5	11
May	2		3	3	3	11
June	2		6	3	4	10
July	3		3	2	2	7
August	5		3	2	3	9
September	3			3	2	11
October	4		1	4	4	3
November			8	9	2	22
December	4	1	3	1	4	26
Total	52	2	36	40	44	141

Two of the specimens from cases diagnosed as pulmonary tuberculosis contained *Oidium Albicans*, the causative organism of Thrush; one other was found to contain spirilla and fusiform bacilli.

Specimens of milk submitted for Bacteriological examination:

From the City of Edmonton	86
From the Province	38
Total	<u>124</u>

Specimens of water examined for Bacteriological content ... 396

Examinations of tap water from the City of Edmonton supply were made over a period of ten months. This water was chlorinated. There were in all 224 such examinations made to determine the number of bacteria in one cubic centimeter. The following table gives the number of examinations in each month; the maximum and minimum count, and the average number of bacteria for each month:

	No.	Max. Ct.	Min. Ct.	Average
March	27	400	1	50
April	26	50	0	10
May	24	60	0	15
June	19	200	0	13
July	22	1000	1	104
August	25	750	1	41
September	22	131	1	11
October	16	15	0	3
November	22	120	0	13
December	25	180	0	18

SPECIAL WORK CARRIED OUT BY THE LABORATORY DURING THE PAST YEAR.

Anti-typhoid vaccine was made for the Military Department for Canada and supplied for innoculating purposes to all the units recruited in Alberta. 36,000 doses in all were furnished. This vaccine was put up in 25 cubic centimeter bottles with rubber caps. Each bottle contained 25 doses. The reactions resulting from its use were particularly slight and its immunizing powers were high. In order to find out the extent of the latter a series of blood tests were carried out on 580 officers and privates of the 49th C.E.F. Battalion, which were recruited and stationed at Edmonton. 90% of the tests were positive one month after inoculation.

Besides this a series of 220 examinations of the nose and throat were made on members of the 51st C.E.F. Battalion in order that healthy "Carriers" of the meningitis might be detected. None were found. Anti-cold vaccine to the extent of 1,000 doses was made for Capt. Hammond, Medical Officer of the 51st C.E.F. Battalion. This vaccine was found to be of some assistance in checking the epidemic of "Grippe" which was active during the autumn and early winter months.

Examinations of drinking water were made at the request of the Militia Department for the various units stationed at Edmonton and many special examinations of soldiers for various conditions, the scope of which was outside the routine work of the Laboratory, were made by the Acting Director at the request of the M. O. of the units recruited in the Edmonton district.

New mailing outfits for the sending to the Laboratory of specimens of sputum and throat swabs were obtained and a circular was issued asking all medical men and druggists to co-operate in the handling of these outfits so that every medical man in the Province would find facilities for sending material to the Laboratory. There are at present 98 supply stations throughout the Province and 155 physicians out of 508 have made use of these.

The following chemical examinations were made by Mr. J. A. Kelso, M.Sc., Director of the Industrial Laboratories, and Analyst of Provincial Laboratory, University of Alberta.

Waters, Chemical only	173.
Liquors	142.
Opiums	51.
Drugs, as Cocaine, Morphine, etc.	9.
Milks for Adulteration	136.
Medico Legal Examinations, as stomachs, poisoned meat, etc.	71.
Miscellaneous Examinations, (bread, salmon, ice cream, berries, etc.)	23.
Butters	12.
Maple Syrup	1.
Varnish Shellac	1.

These comprise to a great extent examinations carried on in assisting the Department of the Attorney-General in the administration of the Criminal Law and the Detective and Liquor License Branches of the same Department.

The water examinations received from medical health officers relate to waters in towns and cities to ascertain its suitability for permanent supply, and from farmers throughout the Province in order to determine its suitability for domestic use.

A great deal of consulting work has also been done by Messrs. Jamieson and Kelso on various problems relating to public health, legal cases and industrial work.

I have the honor to be, Sir,

Your obedient servant,

(Sgd.) HEBER C. JAMIESON,

Acting Director.

REPORT OF THE PROVINCIAL MEDICAL OFFICER OF HEALTH AND DEPUTY REGISTRAR GENERAL

SIR,—I beg herewith to submit the report of the Public Health Branch of the Department of Agriculture for the year 1915.

The Provincial Board of Health during the early part of the year had meetings at intervals, as matters requiring their attention arose, but during the latter part of the year they have met regularly at least once each week, as matters of importance had to be taken up. Among these has been the consideration of desirable amendments and revisions to the Public Health Act and Regulations which has taken up and will continue to take up for some time yet considerable time of the Provincial Board. As the Health Act and Regulations have not been revised, excepting in minor ways, since they were originally framed, the work is a necessary one, and it is hoped that when they are completed the Act and Regulations will be fully efficient and up-to-date in matters of Public Health work.

A new departure for this Department was the decision to issue a Public Health Bulletin, and the initial number appeared in January, 1916. The Board expect good results from this issuance, by bringing physicians and health boards in closer touch with the proceedings of the Provincial Board, so that fuller reporting and more exact results may be obtained.

The judgment of the Supreme Court declaring the vaccination of school children, as defined in Sec. 68 of the Health Regulations, *ultra vires*, came as a surprise to the Provincial Board, after being apparently legal for so many years. However, the amended Act and Regulations will deal with this situation.

Owing to the continuance of the war, Dr. Laidlaw, Provincial Medical Officer of Health, and Dr. Rankin, Provincial Bacteriologist, are still absent, and the Board has yet two *pro tem* members, and the return of the two regular members, judging from the present outlook, will not be for some little time yet.

The health of the Province in respect to infectious diseases has been, on the whole, good. The record for the year has been excellent, although still far from ideal. Along other lines of Public Health work, sanitation, etc., the record is very good.

The following is a synopsis of the work of the Provincial Board of Health for the year 1915 in respect to infectious diseases.

STATISTICAL TABLE.

	Within Municipalities	Outside Municipalities	Total 1915	Total 1914
Typhoid Fever	244	40	284	347
Smallpox	16	56	72	89
Diphtheria	137	26	163	322
Scarlet Fever	117	77	194	719
Measles	2636	20	2656	410
Chickenpox	446	31	477	608
Whooping Cough	262	6	268	451
Mumps	144	...	144	610
Tuberculosis	143	20	163	209
Other Diseases	99	4	103	144

Typhoid. There were 284 cases in 1915 as compared with 347 in 1914 and 638 in 1913. The incidence of this disease shows a steady decline in the past four years. The decline is no doubt due to better sanitation, prompt investigation of outbreaks with the view of getting at the cause, and the recognition of the protection afforded by typhoid vaccine. The larger cities have been remarkably free of this disease. Last year, Calgary, Edmonton and Lethbridge had a combined total of 246 cases, while this year the same cities had only a total of 149, and of these, 65 were reported from Lethbridge. Of these 149 cases from these three cities, but few are chargeable to the cities proper as the source of infection, as most of them came from outside points for hospital accommodation and treatment. Speaking generally, the Lethbridge and Macleod districts had the greater number of cases of typhoid. The further north we go the less typhoid we find. The very few cases of typhoid chargeable directly to the various cities speaks well for the Health Board of the said cities.

Smallpox. In 1915 there were 72 cases as compared with 89 in 1914. This disease has had a few centres of infection, but prompt measures have quickly stamped it out, with the exception of the district around Millet, where cases were not reported promptly. In this district quite a number of cases developed over quite a long period before it was finally got rid of. All the cases of smallpox have been mild and no deaths have occurred. Vaccination and quarantine soon eradicate the disease provided there are no concealed cases.

Scarlet Fever. There were 194 cases in 1915 and 719 in 1914. This is a big reduction, and when we think of the diseased condition that this disease too often leaves in its wake, we are thankful at such a remarkable reduction for the past year.

Diphtheria. There were 163 cases in 1915 and 322 in 1914. This disease also shows a big decline from last year, and no doubt that the now generally recognized merit of antitoxin at least partly accounts for the reduction, as its prompt using in well persons in immunizing doses protects from the disease and thus curtails its spread.

Tuberculosis. There were 163 cases in 1915 and 209 in 1914. This is a decrease over 1914. However, this is one of the diseases with respect to which it is difficult to get information, some doctors reporting well and others forgetting. In future, we hope to get better reports, and hope also that measures as pointed out in past reports may be adopted for the better control and prevention of the disease.

Measles. 2,656 cases occurred in 1915 which is an increase over the 410 cases for last year. This disease is one that is infectious even before the rash develops and so it is hard to control once it comes to the stage of an epidemic. Many grown people have had the disease during the year and several deaths have resulted from complications.

Chickenpox. 477 cases; *Mumps.* 144 cases; *Whooping Cough,* 268 cases; and *Other Diseases,* 103 cases.

Sanitation. More interest is being taken by local boards and also by the public in this important branch of public health work. Good water supplies, closet sanitation and better control of the disposal of garbage and manure (thus helping to prevent fly breeding) are subjects the importance of which the Board is trying to impress upon the public.

Hospitals. Forty hospitals received the Government grant of 25c per patient per day, the total sum paid for the year being \$83,237.25.

Incurables. On incurables \$8,335.25 was expended. On December 31st there were ten incurables at Medicine Hat, eight at Providence General Hospital at Daysland, three at Sacred Heart Hospital, Athabasca, and nine at Lacombe Home, Midnapore.

Destitutes. On destitutes \$5,342.92 was expended and \$499.77 for the burial of destitutes.

REPORTS OF THE INSPECTORS.

Dr. Barrow's Report: Although cases of infectious disease have occurred in many districts in this Province, owing to the improved organization in the smaller towns, villages and rural municipalities, the outbreaks have in most cases been readily controlled, and in 1915 no very widespread epidemics have occurred. Smallpox has markedly decreased, owing to the systematic vaccination carried on during the past few years.

There follows a list of the zymotic diseases in connection with which I visited the towns on the dates mentioned.

PURPOSE OF VISIT	TOWN OR DISTRICT	DATES
Smallpox	Kingman	January 18.
	Calgary	May 3.
Diphtheria	Didsbury	May 6.
	Lethbridge	October 2.
Scarlet Fever	Provost	April 20.
	Czar	October 18.
Chickenpox	Vulcan	January 27-28.
	Airdrie	February 3.
	Millet	November 16.
	Morinville	December 1.
Measles	Fairmont	March 8-20.
Enteric Fever	Athabasca	January 6-9.
	Calgary	May 4, Sept. 23-29.
	Drumheller	May 4-5, Nov. 11, Dec. 8.
	Chauvin	June 1-2.
	Vulcan	September 20-22.
	High River	September 30.
	Macleod	October 1-2.
	Sterling	October 20-21.
	Redcliff	November 3.
	Oyen	November 25.

Also the following towns in connection with:

Tubercular meningitis: Gleichen, April 27, 28.

Ptomaine poisoning: Wetaskiwin, September 28.

Sanitary conditions throughout the Province have steadily improved owing to the increased number of rural municipalities, and to the fact that the local boards of health are becoming informed of their duties and powers under the provisions of the Public Health Act.

During 1915 I visited the following towns to investigate complaints of unsanitary conditions or to advise the local boards at their request on questions of sanitation.

North Ded Deer	January 26.	Evansburg	July 5.
Veteran	Feb. 23, May 18.	Cooking Lake	Sept. 3.
Minburn	March 4.	Stony Plain	Sept. 10.
Drumheller, March 23-25, June 17-18.		New Norway, Sept. 18 and Oct. 27-28.	
Chinook	April 7.	Ferintosh	Oct. 28-29.
Oyen	April 7.	Lamont	Nov. 30 and Dec. 14.
Entwistle	April 14, July 13.	Gadsby	Dec. 16-17.
Calgary	May 26, Oct. 4-6, Oct. 22.		

I investigated reported cases of destitution at or near the following towns:

Whitla	Jan. 13.	Gainford	April 21-22.
Red Deer	Jan. 25.	Edwand	May 12.
Macleod	Feb. 11.	South of Strathcona	Sept. 11.
Carmangay	March 15.	Medicine Hat	Nov. 2.
Lethbridge	March 16.		

In connection with incurable patients I visited:

Medicine Hat	Feb. 15.	Midnapore, Mar. 17, Aug. 26, Nov. 24.
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I inspected the following hospitals receiving Government aid on the dates stated:

Holy Cross, Calgary	Jan. 14.	Beulah Home	Feb. 9.
Salvation Army, Calgary	Jan. 14.	Macleod	Feb. 10.
Stettler	Jan. 20.	Pincher Creek	Feb. 12.
Castor	Jan. 21, July 9.	Grassy Lake	Feb. 13.
Lacombe	Jan. 22, July 9.	Medicine Hat	Feb. 15.
Red Deer	Jan. 25.	Wetaskiwin	Feb. 19.
Lethbridge	Jan. 28.	Consort	Feb. 24.
General, Calgary	Jan. 29.	Strathcona	March 1.
City, Calgary	Jan. 29.	Islay	March 3.
Tubercular, Calgary	Jan. 29.	Boswell, Vegreville	March 5.
Isolation, Calgary	Jan. 29.	General, Vegreville	March 5.
Smallpox, Calgary	Jan. 29.	Lamont	March 9.
General, Edmonton	Feb. 1.	Pakan	March 9.
Trochu	Feb. 4.	Camrose	Mar. 12, Sept. 17.
Misericordia, Edmonton	Feb. 6.	Onoway	Mar. 30.

(Sgd.) V. E. BARROW,
Provincial Medical Inspector of Health.

DR. BOYLE'S REPORT.

From January 1st to November 1st.

During the above mentioned period there was no widespread epidemic of infectious diseases in the Province. The largest outbreak was one of forty reported cases of smallpox in Millet and vicinity, during the summer of this year. Owing to the mild nature of these cases and the antipathy of the people towards quarantine and vaccination, this outbreak was somewhat difficult to deal with.

A considerable number of complaints of nuisances were received and dealt with and numerous visits were made to towns, villages, and mining, railway and lumber camps to secure enforcement of the sanitary regulations.

Throughout the year there was considerable destitution. In addition to those who would be destitute in normal times, there was an additional number owing to the general financial depression.

The following is a list of the places visited, with dates and reasons for such visits:

PURPOSE OF VISIT	TOWN OR DISTRICT	DATES
Smallpox	Gadsby	Apr. 15, May 16.
	Chinook	April 18.
	Halkirk	May 8, 12, 19 and 25.
	Millet	June 19, 22, 29, July 2, 7, 13, 14, 23, 31, Aug. 5, 13, 14, Sept. 15, 20, Oct. 5, 11.
	Wetaskiwin	July 12, 23, 31.
Typhoid	Athabasca	Jan. 20, 27 and Feb. 8.
	Fort Saskatchewan	Feb. 22.
	Commerce	March 12.
Diphtheria	Chipman	Jan. 11.
	Fort Saskatchewan	Jan. 12.
	High River	Aug. 12.
	Coaldale	Aug. 31.
	Ellerslie	Sept. 24-29.
Scarlet Fever	Lamont	Jan. 4.
	Chipman	Jan. 5.
	Red Deer	Feb. 7, 19.
	Olds	Feb. 28.
	Redcliff	Mar. 6.
	Mundare	Mar. 9, 28, Apr. 22.
	Airdrie	Apr. 20.
	Carstairs	Sept. 13, Oct. 4.
	Fort Saskatchewan	Sept. 23.
Chickenpox	Clover Bar	Oct. 23.
	Bashaw	Feb. 5, 16.
	Stettler	Apr. 24, May 7.
	Wetaskiwin	June 30.
	Edwaud	Oct. 25.
Scabies	Beaumont	Jan. 9.
Impetigo Cantagiosa	Leduc	Sept. 11.
Ptomaine Poisoning	Wetaskiwin	Sept. 17-21.
Sanitation	Cluny	Feb. 24.
	Lac la Biche	Mar. 3, May 27, Oct. 14.
	Hughenden	Apr. 7.
	Red Deer	Apr. 27.
	Nordegg	Apr. 30.
	Nevis	May 20.
	A. & G. W.	May 27, 29.
	McLennan	June 1.
	Smoky River	June 2.
	End of E. D. & B. G.	June 2.
	Peace River Crossing	June 3.
	Frank	June 8.
	Blairmore	June 9.
	Taber	June 9.
	Claresholm	June 23.
	Canmore	Aug. 7.
	Bankhead	Aug. 9.
	Drumheller	Aug. 21.
	Calgary	Aug. 23.
	Morinville	Sept. 15.
	Lamont	Sept. 28.
	Wabamun	Sept. 30.
	Sylvan Lake	Oct. 4.
	Clyde	Oct. 20.
	Westlock	Oct. 21.
	Stony Plain	Oct. 22.
	C. N. R. Right of Way	Oct. 25.

PURPOSE OF VISIT	TOWN OR DISTRICT	DATES
Destitution	Therien	Jan. 7.
	Leduc	Feb. 2, June 23.
	Three Hills	Feb. 17.
	Taber	Feb. 22, June 9.
	Medicine Hat	Feb. 23.
	Olds	Feb. 28, July 20, Aug. 10.
		Sept. 8.
	Red Deer	Mar. 1.
	Ponoka	Mar. 2.
	Millet	Mar. 3.
	Daysland	Mar. 4.
	Lac la Biche	Mar. 14.
	Innisfail	Mar. 18, Apr. 5, May 4.
		Sept. 10.
	Camrose	Mar. 30.
	Wabamun	Apr. 9.
	Rocky Mountain House	Apr. 28.
	Morinville	May 14, July 28.
	Nevis	May 20, Oct. 6.
	Egremont	May 22.
	Legal	June 14.
	Viking	June 23.
	Calgary	Aug. 23.
	Frank	Sept. 1.
	Fort Saskatchewan	Sept. 6.
	Midnapore	Sept. 7.
	Sangudo	Sept. 7.
	Tofield	Oct. 9.
	Clive	Oct. 18.
Hospitals	Peace River Crossing	June 3.
	Lamont	July 8.
	Vegreville	July 9.
	Calgary	July 18, Aug. 6.
	Trochu	July 19.
	Athabasca	July 21.
	Wetaskiwin	Aug. 1.
	Lamont	Aug. 2.
	Medicine Hat	Aug. 6.
	Onoway	Aug. 27.

(Sgd.) RUSSELL E. BOYLE,

Assistant Health Inspector.

STATISTICS OF OCCURRENCE OF INFECTIOUS AND CONTAGIOUS DISEASES, 1915.

SCARLET FEVER
(Within Municipalities.)

SEX		MONTHS												AGES						Total		
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	0-1	1-4	5-14	15-24	25-44	45-59		60-69	70-over
M.	F.																					
24	17	5	7	7	3	8	1	1	1	1	1	4	1	2	...	4	15	15	7	...	...	41
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
16	14	3	6	3	3	5	1	3	1	...	...	5	...	...	...	6	19	1	4	...	...	30
6	6	...	...	...	...	...	...	7	1	1	1	2	...	1	...	6	6	...	...	...	...	12
...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	10
4	6	1	3	2	2	...	...	...	...	...	...	...	2	1	...	3	6	...	...	...	...	10
5	7	5	1	...	1	...	...	...	...	...	...	...	5	...	...	4	5	2	1	...	...	12
...	3	...	3	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	3
...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	2
...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
58	59	15	17	14	12	15	4	11	3	2	13	1	10	1	28	55	24	12	...	...	...	117
Total																						

SCARLET FEVER
(Within Municipalities.)

POST OFFICE	SEX		MONTHS												AGES					Total.			
	M.	F.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	0-1	1 4	5-14	15-24	25-44		45-59	60-69	70-over
Acadia	1					1												1					1
Beaver River	1					2											2						1
Cochrane	1				1																		1
Didsbury	1										1						1						1
Edmonton South	4		1	1								2					2						4
Innisfail	2	6	8														1	5	1	1			8
Nanton	1										1												1
Olds	1		1														1						1
Redcliff	8	5		13													1	12					13
Ribstone	1										1												1
Rocky Mountain	1	1					2										1						2
Sturgeon	1	1		2																			2
Vegreville	3	5			8													6	2				8
Victoria	1											1											1
Whitford	17	16	12	3	11	1			3	3					3	11	17		2				33
Total	33	44	14	14	33	4	2	2	3	3	3	4	2		3	16	51	4	3				79

TYPHOID FEVER
(Within Municipalities.)

POST OFFICE	SEX		MONTHS												AGES						Total.		
	M	F.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	0-1	1-4	5-14	15-24	25-44	45-59		60-69	70-over
Calgary	34	18	1	1	3	3	2	2	3	8	16	11	7	1	1	6	14	30	1	1	1	1	52
Camrose	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Chauvin	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Commerce	14	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Diamond City	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Drumheller	2	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Edmonton	21	11	1	1	6	2	2	2	3	5	10	4	2	2	1	4	6	3	17	1	1	1	1
Fort Saskatchewan	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lethbridge	48	17	2	5	8	5	1	1	6	7	4	12	16	5	2	14	23	25	1	1	1	1	1
Macleod	16	5	1	1	1	1	1	1	1	1	2	1	7	1	1	1	1	1	1	1	1	1	1
Medicine Hat	6	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Oyen	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Stony Plain	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vermilion	3	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1
Vulcan	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
R. M. Carbon	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
R. M. Marquis	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
R. M. Mountain View	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
R. M. Ribstone	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	164	80	6	8	22	14	12	2	15	22	37	49	39	18	14	54	64	106	5	1	1	1	244

DIPHTHERIA (Within Municipalities)

POST OFFICE	SEX		MONTHS												AGES						Total.		
	M.	F.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	0-1	1-4	5-14	15-24	25-44	45-59		60-69	70-over
Calgary	33	41	15	7	6	7	4	1	3	3	1	7	10	15	2	21	32	10	8	1	..	..	74
Consort	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Edmonton	24	23	2	6	1	3	4	2	2	1	2	7	14	5	..	7	27	5	7	1	..	..	47
Fort Saskatchewan	2	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	3
Gleichen	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	1
Killam	1	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Lethbridge	..	2	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	1
Medicine Hat	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1
Pincher Creek	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Tollerton	1	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1
Vermilion	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1
Wainwright	1	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	3
R. M. Steamtown	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Total	64	73	21	11	12	5	8	5	6	4	3	16	24	22	2	31	66	17	19	2	..	..	137
(Without Municipalities)																							
Bow Valley	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	1
Didsbury	1	10	1	3	7	..	..	..	..	..	..	..	..	..	..	4	4	2	1	..	..	..	11
Edmonton South	1	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	1
Leduc	1	1	..	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	2
Taber	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	1
Vermilion	1	1	..	..	..	..	..	1	..	1	1	..	..	..	..	1	..	1	..	..	..	..	2
Victoria	1	2	..	3	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	3
Warner	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
Whitford	..	4	1	..	..	..	..	..	3	..	..	..	..	..	..	2	2	..	..	..	..	..	4
Total	6	20	3	5	10	1	3	2	2	..	..	..	..	1	9	11	3	2	..	..	..	..	26

SMALLPOX
(Within Municipalities)

POST OFFICE	SEX		MONTHS												AGES					Total.			
	M.	F.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	0-1	1-4	5-14	15-24	25-44		45-59	60-69	70-over
Calgary	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	1	1	1	5
Edmonton	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Gadsby	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Medicine Hat	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Millet	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Red Deer	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
R. M. Stewart	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1
Total	13	3	1	4	3	3	3	4	4	4	1	1	1	1	1	1	5	11	11	4	1	1	16
(Without Municipalities)																							
Coronation	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Pembina	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Redcliff	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Stettler	7	7	1	1	7	6	1	1	1	1	1	1	1	1	1	2	3	4	5	1	1	1	14
Wetaskiwin	26	13	1	1	1	1	1	1	1	1	1	1	1	1	1	7	10	5	12	4	1	1	39
Total	36	20	1	1	7	6	21	10	4	3	1	1	2	1	1	9	13	10	19	4	1	1	56

CHICKENPOX
(Within Municipalities)

POST OFFICE	SEX		MONTHS												AGES					Total.			
	M.	F.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	0-1	1-4	5-14	15-24	25-44		45-59	60-69	70-over
Camrose	6	6	..	..	..	..	1	1	..	..	..	..	8	2	..	..	4	4	2	..	..	..	12
Calgary	76	83	37	15	19	15	15	6	2	3	3	15	29	..	..	33	115	7	3	1	..	..	159
Edmonton	104	107	23	19	14	17	36	52	..	5	6	11	14	14	11	51	135	7	6	1	..	..	211
Fort Saskatchewan	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
High River	1	2	..	3	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	3
Lethbridge	14	8	..	7	..	1	..	..	..	..	..	7	4	3	1	6	14	..	1	..	..	..	22
Medicine Hat	2	..	..	..	..	..	..	..	..	..	..	2	..	..	..	1	1	1	..	..	..	..	3
Millet	1	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	3
Ponoka	2	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	1	1	..	..	..	..	3
Redcliff	2	6	8	..	..	..	..	..	..	..	..	..	..	..	..	2	6	..	..	..	..	..	12
Staveland	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	14
Vulcan	3	11	14	..	..	..	..	..	..	..	..	..	..	..	..	5	7	1	1	..	..	..	32
R. M. Asquith	1	2	..	..	..	3	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	5
R. M. Ribstone	3	2	..	..	..	1	4	..	..	..	..	..	..	..	..	1	4	..	..	..	..	..	10
Total	215	231	82	44	35	40	56	58	4	8	9	35	56	19	12	104	294	20	13	3	..	..	446
(Without Municipalities)																							
Acadia	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Clareholm	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	3
Camrose	3	2	..	5	..	..	..	..	..	..	..	..	..	..	..	2	3	..	..	..	..	..	5
Hand Hills	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
High River	1	3	..	..	..	..	..	4	..	..	..	..	..	..	..	2	2	..	..	..	..	..	1
Leduc	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
Olds	..	2	..	..	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	2
Stettler	2	3	..	..	1	4	..	..	..	..	..	..	..	..	..	..	2	3	..	..	..	..	3
Victoria	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	2
Wetaskiwin	2	2	..	..	..	2	..	..	..	1	..	..	1	1	..	1	3	..	..	..	..	..	4
Whitford	2	2	..	3	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	4
Total	14	17	1	8	3	3	5	3	5	1	1	1	1	1	..	7	16	8	..	..	..	..	31

MEASLES
(Within Municipalities)

POST OFFICE	SEX		MONTHS												AGES									
	M.	F.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	0-1	1-4	5-14	15-24	25-44	45-59	60-69	70-over	Total	
Calgary	513	513	2	11	195	549	216	42	5	1	2	2	1	7	263	701	36	19					1026	
Edmonton	775	752	181	304	556	296	143	31	10	1	3	1	1	67	472	851	84	51	1	1		1	1527	
Camrose	21	20	1		1	1	20	18								10	25	5	1				41	
Carstairs	2	2										2					2						2	
Consort	10	11				21										3	10	5	2	1			21	
Fort Saskatchewan		1					1									1							1	
Grassy Lake		1	1													1							1	
Lethbridge	4	1			1	1						1	3			3	1		2				5	
Medicine Hat	2	3				2	3									3	1		1				5	
Provost	4					3	1												4				4	
Redcliff		2	1	1												2							2	
Vegreville		1	1									1					1						2	
Total	1331	1305	184	306	572	517	715	266	52	6	4	6	3	5	74	757	1592	130	80	2		1	2636	
(Without Municipalities)																								
Cochrane	2							2									2						2	
Coronation	3	5						8									8						8	
Edson	1	1					1										2						2	
Gleichen		1									1					1							1	
High River	1				1													1					1	
Leduc	1		1														1						1	
Redcliff		1	1													1							1	
St. Albert		1																1					1	
Stettler	1	1									1						1						1	
Sturgeon	1	1		1	1										1		1						2	
Total	10	10	1	1	2	1	11	1	1	2					1	2	15	1	1				20	

MUMPS (Within Municipalities)

POST OFFICE	SEX		MONTHS												AGES						Total		
	M.	F.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	0-1	1-4	5-14	15-24	25-44	45-59		60-69	70-over
Camrose	3	..	..	..	..	..	..	3	..	..	..	..	..	..	..	2	1	..	..	..	..	..	3
Calgary	77	52	4	6	16	20	42	21	9	6	..	4	..	1	..	12	88	19	10	..	..	..	129
Edmonton	8	4	3	6	6	1	..	..	..	..	..	1	1	..	..	2	6	4	..	..	..	..	12
Total	88	56	7	6	22	21	42	24	9	6	5	5	1	1	..	16	95	23	10	..	..	..	144

(No Mumps Without Municipalities)

(No Mumps Without Municipalities)

WHOOPING COUGH (Within Municipalities)

Municipality	Total	Without Municipalities												Total																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		1	2	3	4	5	6	7	8	9	10	11	12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Camrose	1	1	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Calgary	65	73	2	2	9	20	28	40	37	53	82	3</

(Without Municipalities)

POST OFFICE	SEX	MONTHS												AGES					Total		
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	0-1	1-4	5-14	15-24	25-44		45-59	60-69	70-over
Redcliff	M.	1	4	..	..	..	..	5	..	..	..	..	1	1	3	..	..	..	..	..	9
Victoria	F.	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1
Total	F.	1	5	..	..	..	..	5	..	..	..	1	1	1	3	1	..	..	..	..	6

TUBERCULOSIS (Within Municipalities)

POST OFFICE	SEX	MONTHS												AGES						Total		
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	0-1	1-4	5-14	15-24	25-44	45-59		60-69	70-over
Camrose	M.	F.	1	1	1	2	3
Calgary	60	23	2	12	13	11	7	6	7	6	4	4	11	4	20	48	4	3	..	83
Edmonton	22	20	4	3	2	8	4	4	3	3	3	3	2	3	..	1	12	24	2	5	1	42
Fort Saskatchewan	1	1	1	1
Grouard	1	2	2	1	2	1	3
High River	1	..	1	1	3
Lethbridge	7	3	..	1	3	2	..	4	..	1	6	4	10
Total	942	49	6	16	18	22	13	14	11	11	3	7	14	8	..	1	8	42	79	7	5	143
(Without Municipalities)																						
Camrose	1	2	1	2	1	2
Edson	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	1
High River	..	1	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	1	1	1	1
Ribstone	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	1	1
St. Albert	1	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1	1	1	1	1
St. Paul	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1
Sturgeon	1	1	..	..	..	..	..	2	..	..	..	..	1	..	..	2	..	..	..	..	2
Taber	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1	1	1	1
Vegreville	1	1	..	1	..	..	..	..	..	..	..	1	..	..	..	..	2	2	..	..	2
Victoria	2	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	2	..	..	2
Wetaskiwin	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1
Whitford	2	2	..	..	..	..	..	2	1	1	1	1	..	..	..	..	4	..	..	..	4
Total	10	10	4	2	2	..	1	5	4	1	1	1	1	1	..	5	10	5	..	..	20

(Without Municipalities)

OTHER DISEASES
(Within Municipalities)

POST OFFICE	SEX		MONTHS												AGES						Total		
	M.	F.	January	February	March	April	May	June	July	August	September	October	November	December	0-1	1-4	5-14	15-24	25-44	45-59		60-69	70-over
Camrose	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
Calgary	13	10	4	4	1	5	1	..	2	1	3	..	..	2	3	4	4	2	7	2	1	..	23
Edmonton	..	31	3	15	17	11	10	3	1	2	1	6	2	3	4	18	27	14	4	1	..	71	
Lethbridge	1	2	..	..	..	1	..	1	..	..	1	..	..	..	..	1	2	..	..	..	..	..	3
Ponoka	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1
Total	55	44	7	20	18	17	11	4	3	3	4	1	7	4	6	9	25	30	21	6	2	..	99
(Without Municipalities)																							
Rocky Mountain	..	2	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	1	1	..	..	..	2
Stettler	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..	1
Wainwright	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1
Total	..	4	..	..	..	..	1	..	..	..	..	..	3	3	3	1	..	2	1	..	..	..	4

Respectfully submitted,

T. J. NORMAN,
Provincial Medical Officer of Health, pro tem.

VITAL STATISTICS.

SIR,—Following is the 1915 Annual Report for the Births, Marriages and Deaths which have been recorded with the Registrar-General's Department during that year. The figures given include only births, marriages and deaths which actually took place during the year 1915, and although a fair number were registered during 1915 that occurred in previous years, these late registrations have been excluded from the following tables, so that these tables would be representative of the year 1915 only.

The registrations of births for 1915 are 13,452, as against 13,685 for the previous year, a decrease of 233. This decrease is not as much as was anticipated, as owing to the war the population of this Province must be considerably depleted.

The registrations of marriages for 1915 are 4,202 as against 4,623 for the year 1914, a decrease of 421, thus constituting the lowest record since the year 1911, also probably resulting from the decreased population. There were four brides under the ages of 15 years as compared with 6 in the previous year. An amendment to the Marriage Ordinance has been passed by the Provincial Legislature since these tables were compiled which makes it now illegal for any person to contract a marriage who is under the age of 15 years.

The registrations of deaths received for 1915 were 3,588 as against 4,147 for the previous year, a decrease of 559. With the exception of diseases of early infancy, tuberculosis still exacts the heaviest toll, with pneumonia a good second. Infantile mortality is not yet on the decline, the number of deaths of children under one year being 1,283, these figures constituting 338 of the total deaths, compared with 332 in the previous year and 324 in 1913. The registrations show that the greatest mortality amongst these infants occur in cases where there have been no medical men in attendance at the births.

The number of stillbirths which occurred during 1915 were 305 and which are not included in any of the above figures. The number for 1914 was 315.

VITAL STATISTICS, 1905 TO 1915, INCLUSIVE.

Year	Births	Marriages	Deaths	Total
1905	421	187	114	722
1906	3,033	927	1,091	5,051
1907	4,732	1,907	1,578	8,217
1908	5,973	2,032	2,188	10,193
1909	6,897	2,384	2,662	11,943
1910	8,231	3,086	3,526	14,843
1911	8,813	3,630	3,618	16,061
1912	10,284	4,429	4,232	18,945
1913	11,871	5,053	4,432	21,356
1914	13,685	4,623	4,147	22,455
1915	13,452	4,202	3,588	21,242

TOTAL REGISTRATIONS RECEIVED OF ALL BIRTHS, MARRIAGES AND DEATHS
FOR EACH MONTH OF THE YEAR 1915.

Months	Births	Marriages	Deaths
January	1,198	354	329
February	1,139	350	281
March	1,219	268	343
April	1,134	341	304
May	1,151	292	248
June	1,076	386	271
July	1,094	319	358
August	1,161	272	321
September	1,091	313	289
October	1,142	301	286
November	1,042	469	223
December	1,005	537	335
Totals	13,452	4,202	3,588

REGISTRATIONS BY ELECTORAL DISTRICTS FOR THE YEAR 1915.

BIRTHS.

Electoral Districts	Male	Female	Total
Acadia	129	113	242
Alexandra	73	53	126
Athabasca	77	68	145
Beaver River	140	121	261
Bow Valley	35	25	60
Calgary North (exclusive of city)....	4	4	8
Calgary South (exclusive of city)....	1	2	3
Camrose	174	153	327
Cardston	75	61	136
Claresholm	40	41	81
Clearwater	10	12	22
Cochrane	42	40	82
Coronation	85	114	199
Didsbury	135	97	232
Edmonton South	50	61	111
Edson	60	40	100
Gleichen	90	85	175
Grouard	51	31	82
Hand Hills	160	132	292
High River	59	47	106
Innisfail	79	59	138
Lacombe	74	70	144
Lac Ste. Anne	56	66	122
Leduc	94	83	177
Lethbridge District	26	23	49
Little Bow	66	67	133
Macleod	56	49	105
Medicine Hat District	114	109	223
Nanton	55	46	101
Okotoks	27	36	63
Olds	67	74	141
Peace River	25	21	46
Pembina	53	60	113
Pincher Creek	35	33	68
Ponoka	43	45	88
Redcliff	72	80	152
Red Deer	96	91	187
Ribstone	99	95	194
Rocky Mountain	180	151	331
St. Albert	108	91	199
St. Paul	111	106	217
Sedgewick	113	105	218
Stettler	213	166	379
Stony Plain	87	60	147
Sturgeon	164	131	295
Taber	184	161	345
Vegreville	173	163	336
Vermilion	162	144	306
Victoria	127	124	251
Wainwright	82	68	150
Warner	32	41	73
Wetaskiwin	47	60	107
Whitford	227	228	455
Calgary City	1,140	1,022	2,162
Edmonton City	928	870	1,798
Lethbridge City	140	137	277
Medicine Hat City	214	158	372
Totals	7,059	6,393	13,452

REGISTRATIONS BY ELECTORAL DISTRICTS FOR THE YEAR 1915 BY MONTHS

BIRTHS.

Electoral Districts	Jan	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Acadia	17	15	18	18	23	22	22	25	15	20	21	26	242
Alexandra	15	9	6	8	12	12	12	14	3	17	11	7	126
Athabasca	13	17	13	19	14	13	12	7	11	8	8	10	145
Beaver River	11	10	19	22	26	25	19	32	17	19	37	24	261
Bow Valley	1	4	1	5	5	4	5	5	7	9	7	7	60
Calgary North				1	1				2	4			8
Calgary South						1		1					3
Camrose	33	22	33	22	38	33	28	16	27	24	38	13	327
Cardston	8	13	13	8	9	11	12	16	6	17	13	10	136
Claresholm	6	5	10	8	3	4	7	10	7	9	6	6	81
Clearwater	3	2	2	3	1			3	3	3	1	1	22
Cochrane	6	3	4	9	6	9	10	9	9	5	4	8	82
Coronation	18	14	19	19	17	12	18	20	20	14	14	14	199
Didsbury	27	26	18	28	18	19	16	12	21	14	14	17	232
Edmonton S.	18	18	16	10	12	10	5	4	4	4	2	8	111
Edson	5	11	10	7	10	12	6	5	9	11	8	6	100
Gleichen	16	17	14	13	17	13	14	7	20	18	16	10	175
Grouard	9	8	4	6	3	12	4	10	6	4	6	10	82
Hand Hills	27	24	26	20	23	20	27	24	29	27	25	20	292
High River	9	9	7	12	6	8	8	10	10	9	10	8	106
Innisfail	13	9	10	22	13	5	9	22	9	11	9	6	138
Lacombe	16	9	12	17	8	7	7	16	13	19	12	8	144
Lac Ste. Anne	15	16	5	7	9	5	11	12	8	16	5	13	122
Leduc	22	20	9	10	13	11	14	16	25	7	12	18	177
Lethbridge Dis.	3	5	7	6	6	3	1	5	4	6	1	2	49
Little Bow	15	13	10	6	9	16	17	8	4	11	14	10	133
Macleod	6	11	8	13	12	9	6	10	6	8	11	5	105
Med. Hat Dis.	34	21	21	16	14	12	13	10	10	27	32	13	223
Nanton	11	6	7	3	10	8	9	12	12	7	8	8	101
Okotoks	11	6	7	1	6	9	4	2	6	4	2	5	63
Olds	14	9	13	14	12	13	11	12	12	10	13	8	141
Peace River	1	4	3	3	1	7	2	4	6	6	6	3	46
Pembina		10	16	6	18	9	10	9	10	12	4	9	113
Poncha Creek	5	6	4	8	5	3	3	6	7	9	4	8	68
Ponoka	7	5	13	3	6	10	7	9	7	6	5	10	88
Redcliff	20	15	18	13	15	13	9	14	13	7	10	5	152
Red Deer	23	9	12	21	18	14	11	21	12	12	18	16	187
Ribstone	24	14	12	13	16	19	15	14	17	19	16	15	194
Rocky Mt.	38	38	32	29	35	27	21	25	25	24	20	17	331
St. Albert	20	14	22	19	12	14	17	21	11	12	14	23	199
St. Paul	25	26	22	21	28	4	23	15	15	10	18	10	217
Sedgewick	18	22	15	20	24	14	17	18	23	15	14	18	218
Stettler	32	20	40	45	33	31	32	30	29	26	24	37	379
Stony Plain	15	10	13	13	8	10	17	9	12	19	8	13	147
Sturgeon	25	22	20	18	22	32	23	23	29	18	34	29	295
Taber	33	41	24	33	28	23	35	19	38	23	28	20	345
Vegreville	42	38	33	29	21	20	21	29	32	29	16	26	336
Vermilion	26	29	31	28	23	16	25	24	26	24	24	30	306
Victoria	18	25	24	21	24	15	20	25	20	26	16	17	251
Wainwright	16	4	15	13	13	9	8	16	10	17	13	16	150
Warner	12	7	10	4	2	7	3		12	9	4	3	73
Wetaskiwin	8	5	11	9	12	12	5	9	8	15	6	7	107
Whitford	30	48	51	30	39	38	33	42	36	43	34	31	455
Calgary City	176	174	205	195	203	162	187	195	174	179	155	157	2,162
Edmonton City	123	128	178	140	139	178	171	171	137	163	139	131	1,798
Lethbridge C.	27	29	26	21	16	19	21	28	24	23	24	19	277
Med. Hat City	32	44	29	36	24	33	28	26	32	27	28	33	372
Totals	1198	1139	1219	1134	1151	1076	1094	1161	1091	1142	1042	1005	13,452

BIRTHS BY ELECTORAL DISTRICTS DURING THE YEAR 1915 BY
NATIONALITY OF PARENTS.

DISTRICTS	Canadian	British	U. S. A.	Foreign	Mixed	Unknown	Total
Acadia	66	44	56	35	41		242
Alexandra	29	55	12	18	12		126
Athabasca	79	19	10	19	18		145
Beaver River	109	7	31	98	10	6	261
Bow Valley	15	16	15	7	7		60
Calgary North	1	2	1		4		8
Calgary South	3						3
Camrose	12	25	77	133	49	1	327
Cardston	5	19	76	8	28		136
Clareholm	13	20	20	17	11		81
Clearwater	9	2	2	6	2	1	22
Cochrane	24	35	3	6	6	8	82
Coronation	46	40	38	44	31		199
Didsbury	74	37	36	26	59		232
Edmonton South	18	40	2	44	4	3	111
Edson	15	27	8	30	13	7	100
Gleichen	13	57	48	31	26		175
Grouard	61	3	7	1	7	3	82
Hand Hills	60	81	51	44	55	1	292
High River	33	25	23	6	19		106
Innisfail	24	47	19	14	33	1	138
Lacombe	28	34	33	13	36		144
Lac Ste. Anne	35	27	21	20	14	5	122
Leduc	25	13	24	89	25	1	177
Lethbridge Dist.	9	18	10	7	5		49
Little Bow	32	16	40	16	28	1	133
Macleod	23	46	7	13	16		105
Med. Hat Dist.	16	27	44	115	20	1	223
Nanton	21	24	32	7	16	1	101
Okotoks	17	26	11	1	8	0	63
Olds	36	26	26	28	25		141
Peace River	22	6	5	10	3		46
Pembina	22	26	18	26	11		113
Pincher Creek	23	24	8	2	11		68
Ponoka	16	20	20	18	12	2	88
Redcliff	19	24	22	73	11	3	152
Red Deer	48	52	22	36	29		187
Ribstone	34	46	56	32	25	1	194
Rocky Mountain	33	123	31	129	13	2	331
St. Albert	111	13	18	32	25		199
St. Paul	140	14	19	23	16	5	217
Sedgewick	35	46	53	48	36		218
Stettler	79	66	83	74	75	2	379
Stony Plain	16	15	30	67	19		147
Sturgeon	34	48	45	148	20		295
Taber	36	65	117	84	42	1	345
Vegreville	28	29	53	196	28	2	336
Vermilion	39	47	21	178	20	1	306
Victoria	37	26	10	168	10		251
Wainwright	41	44	20	24	20	1	150
Warner	9	10	27	16	11		73
Wetaskiwin	11	18	29	36	13		107
Whitford	24	13	18	395	5		455
Calgary City	463	1,109	84	247	220	39	2,162
Edmonton City	410	772	87	270	237	22	1,798
Lethbridge City	54	156	19	17	27	4	277
Med'ne Hat City	99	130	38	62	42	1	372
Totals	2,874	3,800	1,736	3,307	1,609	126	13,452

MARRIAGES by Religious Denominations in Electoral Districts, 1915.

ELECTORAL DISTRICTS

		Religious Denominations.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
		Presbyterian			Methodist		Anglican		Roman Catholic		Lutheran		Baptist		Congregationalist		Salvation Army		Mennonite		Mormon		Greek Catholic		Greek Orthodox		Greek Independent		Moravian		Others		Not Stated		Totals																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Acadia	M	15	10	11	6	5	4	1	..	3	1	60																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Alexandra	M	5	4	4	1	3	31																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	F	5	5	3	1	5	44																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Athabasca	M	..	1	6	20	1	1	22																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Beaver River	M	1	4	1	24	1	38																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Camrose	M	7	11	9	17	19	4	

Edmonton South	M F	10 12	3 4	5 4	1 3	5 4	1 2	1 1
Edson	M F	1 2	1 2	4 4	3 4	4 4	1 1	1 1
Gleichen	M F	2 5	7 7	7 5	6 5	2 2	1 1	1 1
Grouard	M F	.. ..	.. ..	1 1	14 14	....	....	....
Hand Hills	M F	15 11	8 10	7 4	4 6	5 5	3 4	1 2
High River	M F	11 8	4 7	4 6	1 0	1 2	....	....
Innisfail	M F	11 13	4 6	6 6	0 ..	2 ..	2 1	2 1
Lacombe	M F	12 17	23 19	10 7	1 4	3 2	1 1	2 2
Lac Ste. Anne	M F	2 2	2 2	1 1	5 6	2 1	2 1	2 1
Leduc	M F	6 4	2 4	4 4	6 4	6 1	1 2	1 2
Little Bow	M F	6 8	9 7	1 4	1 ..	3 5	2 1	3 1
Macleod	M F	9 10	7 8	7 4	4 4	1 1	1 1	1 1
Medicine Hat District	M F	.. ..	1/ 3	1 1	.. ..	4 3	4 4	1 1
Nanton	M F	10 6	4 7	5 6	1 1	1 1	1 1	1 1
Okotoks	M F	7 8	4 10	1 2	1 4	1 3	1 1	1 1
Olds	M F	11 8	8 1	2 5	4 5	3 1	4 2	4 3
Peace River	M F	9 9	5 5	4 4	8 10	1 1	2 1	2 1

MARRIAGES by Religious Denominations in Electoral Districts, 1915.—(Continued.)

ELECTORAL DISTRICTS		Religious Denominations															Totals	
	Sex	Presbyterian	Methodist	Anglican	Roman Catholic	Lutheran	Baptist	(Congregational	Salvation Army	Mennonite	Mormon	Greek Catholic	Greek Orthodox	Greek Independent	Moravian	Others	Not Stated	
Pembina	M	3	5	2	3	1	2	1	..	..	..	..	..	..	..	..	3	1
	F	3	4	2	2	2	2	1	..	..	..	..	..	..	..	..	2	19
Pincher Creek	M	2	4	7	10	1	..	..	..	..	1	..	..	..	..	..	..	..
	F	3	4	7	8	1	2	..	..	..	1	..	..	..	..	..	2	27
Ponoka	M	6	8	8	2	2	1	1	..	1	..	..	..	..	4	1	..	..
	F	6	12	4	2	2	..	..	..	..	..	..	..	..	4	..	..	32
Redcliff	M	3	3	2	1	3	1	..	..	..	..	1	..	..	..	..	..	..
	F	3	5	2	..	1	1	1	..	..	..	1	..	..	..	..	2	16
Red Deer	M	20	13	2	5	5	4	..	..	..	1	..	..	..	..	..	3	1
	F	19	17	7	2	6	3	3	..	..	..	1	..	..	..	..	2	60
Ribstone	M	7	11	16	12	7	1	..	..	..	..	..	..	..	..	..	5	2
	F	7	7	16	11	10	2	..	..	..	..	..	..	..	..	..	6	61
Rocky Mountain	M	17	8	24	15	5	1	1	..	..	..	1	..	..	..	..	3	3
	F	16	7	26	20	4	2	..	1	..	..	..	..	..	..	..	1	78
St. Albert	M	..	..	..	30	..	1	..	..	..	..	..	..	..	..	..	..	..
	F	..	..	..	30	..	..	..	..	..	..	..	..	..	..	1	..	31
St. Paul de Metis	M	..	1	3	34	2	..	..	..	..	..	..	..	..	..	..	2	..
	F	1	1	2	34	1	1	1	..	..	..	..	..	..	..	..	1	42
Sedgewick	M	6	11	3	5	12	2	..	..	..	..	..	..	..	..	..	4	..
	F	6	4	5	6	15	3	..	..	..	..	..	..	..	..	..	4	43
Stettler	M	28	21	15	7	15	2	..	..	1	..	..	..	..	..	..	4	1
	F	29	23	11	6	12	4	4	..	1	..	..	..	..	..	..	4	94

Stony Plain	M	1	..	..	..	6	1	..	..	..	..	..	..	..	..	3	..	10
Sturgeon	M	4	2	3	4	..	1	..	..	..	..	..	..	..	..	1	1	16
Taber	F	4	3	2	5	..	..	..	..	..	..	..	..	..	..	2	..	..
Taber	M	13	10	8	7	6	..	1	..	..	..	..	..	..	..	2	..	61
Taber	F	9	11	7	8	3	3	..	..	..	..	..	..	..	..	2	..	..
Vegreville	M	8	17	8	43	15	3	..	..	..	..	..	..	..	..	44	1	..
Vegreville	F	9	9	10	47	15	2	1	..	..	..	..	..	..	..	45	2	153
Vermilion	M	9	11	12	1	2	2	..	..	..	..	..	..	..	..	6	1	..
Vermilion	F	9	10	12	1	3	3	..	..	..	..	..	..	..	..	6	..	47
Victoria	M	5	5	4	16	3	1	..	..	..	..	..	..	..	..	1	5	..
Victoria	F	4	6	3	20	1	1	..	..	..	..	..	..	..	..	1	7	61
Wainwright	M	9	12	8	6	4	2	1	..	..	..	..	..	..	..	3	..	..
Wainwright	F	10	12	11	6	3	..	..	..	..	..	..	..	..	..	..	..	45
Warner	M	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Warner	F	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Wetaskiwin	M	13	15	2	6	13	3	1	1	..	..	..	..	..	..	6	..	..
Wetaskiwin	F	12	16	2	8	11	3	..	..	..	..	..	..	..	..	7	1	60
Whitford	M	6	1	2	6	..	2	..	..	..	..	..	..	..	..	21	1	..
Whitford	F	6	..	5	6	1	1	..	..	..	..	..	..	..	..	20	..	70
Calgary City	M	278	190	274	49	43	78	5	5	3	3	3	2	..	..	13	46	8
Calgary City	F	280	177	286	60	54	68	7	6	1	2	..	3	..	..	11	35	10,1000
Edmonton City	M	222	153	192	108	84	64	11	..	4	1	5	9	..	..	86	9	..
Edmonton City	F	223	153	195	128	84	57	2	1	4	4	4	5	..	..	84	3	948
Lethbridge City	M	47	41	39	23	11	4	1	2	1	7	1	1	..	..	5	14	1
Lethbridge City	F	53	46	37	23	14	9	1	1	3	3	..	..	..	..	2	2	198
Medicine Hat City	M	48	16	31	24	24	9	2	..	..	..	..	..	..	..	6	3	..
Medicine Hat City	F	47	25	24	22	24	14	1	..	..	..	..	..	..	..	3	10	171
Total		1869	1456	1583	1159	686	440	71	20	38	125	45	150	13	79	607	63	4202

MARRIAGES by Ages in Electoral Districts, 1915.

ELECTORAL DISTRICTS	Sex	Ages.											Total
		Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-59	60 and over	Not stated	
Acadia	M	..	..	23	21	11	4	1	..	..	..	..	60
	F	..	22	23	5	6	2	1	1	..	..	..
Alexandra	M	..	..	4	8	5	2	..	..	..	..	..	19
	F	..	5	9	1	1	2	..	1	..	..	..
Athabasca	M	..	..	13	9	5	4	..	..	..	..	..	31
	F	..	13	7	5	3	2	1	..	..	..	..
Beaver River ..	M	..	3	14	12	12	1	..	..	2	..	..	44
	F	1	25	6	5	3	2	..	..	2	..	..
Bow Valley	M	..	1	6	7	5	2	..	1	..	..	..	22
	F	..	7	6	4	4	..	1	..	..	..	..
Camrose	M	..	3	24	26	12	6	2	..	1	2	..	76
	F	..	28	22	16	2	3	1	3	1	..	..
Cardston	M	..	..	16	9	5	3	4	..	1	..	..	38
	F	..	9	22	4	2	1	..	..	..	..	..
Claresholm	M	..	..	4	3	7	..	..	..	..	..	..	14
	F	..	3	8	1	1	1	..	..	..	..	..
Clearwater	M	..	..	2	2	..	..	..	..	..	..	..	4
	F	..	1	2	..	..	1	..	..	..	..	..
Cochrane	M	..	..	2	5	1	1	..	2	..	..	..	11
	F	..	2	4	3	2	..	..	..	..	..	..
Coronation	M	..	..	7	12	13	3	1	..	..	..	..	36
	F	..	11	9	10	4	1	1	..	..	..	..
Didsbury	M	..	4	11	14	5	3	1	1	..	..	..	39
	F	1	13	11	4	6	1	1	1	..	1	..	
Edmonton South.	M	..	1	7	6	7	3	1	1	1	1	..	28
	F	..	7	11	3	2	3	1	1	..	..	..
Edson	M	..	2	1	4	..	2	..	1	..	..	..	10
	F	..	5	1	..	3	1	..	..	..	..	..
Gleichen	M	..	8	12	7	4	..	..	..	..	..	..	31
	F	..	18	8	2	1	1	..	..	1	..	..
Grouard	M	..	6	5	2	1	..	..	..	..	1	..	15
	F	..	11	2	..	..	..	..	1	..	1	..	
Hand Hills	M	..	4	20	16	6	1	1	1	3	..	..	52
	F	..	25	14	3	6	1	1	1	1	..	..
High River	M	..	2	3	10	5	..	1	..	1	..	..	22
	F	..	6	8	4	1	2	1	..	..	..	..
Innisfail	M	..	..	7	14	5	..	..	1	1	..	..	28
	F	..	11	13	1	1	1	1	..	..	..	..
Lacombe	M	..	30	19	5	1	..	1	..	..	..	..	56
	F	..	27	17	6	2	2	1	..	1	..	..
Lac Ste. Anne ...	M	..	1	3	7	1	..	..	..	..	..	..	12
	F	..	7	4	..	..	1	..	..	..	..	..
Leduc	M	..	1	9	10	3	3	4	1	..	..	..	31
	F	..	12	12	1	4	2	..	..	..	..	..
Lethbridge Dis... (exclusive of city)	M	..	..	..	..	..	..	..	..	..	..	..
	F	..	..	..	..	..	..	..	..	..	..	..
Little Bow	M	..	3	8	7	5	2	..	..	1	1	..	27
	F	..	11	10	3	1	..	1	1	..	..	..

MARRIAGES by Ages in Electoral Districts, 1915.—(Continued).

ELECTORAL DISTRICTS	Sex	Ages.											Total
		Under 15	15—19	20—24	25—29	30—34	35—39	40—44	45—49	50—59	60 and over	Not stated	
Macleod	M	..	5	9	15	5	..	..	1	..	..	..	35
	F	..	12	10	6	3	2	2	..	..	..	..
Med. Hat District	M	..	1	5	3	2	1	..	1	..	..	..	13
	F	..	5	3	4	..	..	1	..	..	..	..
Nanton	M	..	1	7	9	5	..	..	1	..	..	..	23
	F	..	8	6	6	1	1	..	1	..	..	..
Okotoks	M	..	6	7	..	1	..	..	..	..	..	..	14
	F	..	10	3	1	..	..	..	..	..	..	..
Olds	M	..	..	13	14	5	2	1	1	..	..	..	36
	F	..	13	12	6	4	..	1	..	..	..	..
Peace River	M	..	2	8	12	6	1	..	..	..	..	..	29
	F	..	8	12	8	1	..	..	..	..	..	..
Pembina	M	..	..	4	10	2	1	..	1	1	..	..	19
	F	..	5	6	3	3	1	..	1	..	..	..
Pincher Creek ..	M	..	..	3	7	9	2	5	1	..	..	..	27
	F	..	3	10	7	2	4	1	..	..	..	..
Ponoka	M	..	9	12	6	2	1	2	..	..	..	..	32
	F	..	20	7	3	1	..	1	..	..	..	..
Redcliff	M	..	1	3	9	1	1	..	..	1	..	..	16
	F	..	6	6	2	..	..	1	..	1	..	..
Red Deer	M	..	..	18	23	11	6	1	1	..	..	..	60
	F	..	22	18	14	2	2	2	..	..	..	..
Ribstone	M	..	..	18	19	12	6	4	1	1	..	..	61
	F	..	24	13	13	5	4	1	..	1	..	..
Rocky Mt.	M	..	..	26	25	12	8	2	4	1	..	..	78
	F	..	24	22	16	8	4	2	1	1	..	..
St. Albert	M	..	..	7	16	4	2	1	1	..	..	..	31
	F	..	12	14	1	3	..	1	..	..	..	..
St. Paul	M	..	5	12	8	6	3	2	2	4	..	..	42
	F	..	18	8	6	3	2	..	1	4	..	..
Sedgewick	M	..	..	20	15	3	2	2	..	1	..	..	43
	F	..	10	13	12	5	2	1	..	..	..	..
Stettler	M	..	4	20	32	23	5	7	2	1	..	..	94
	F	..	25	36	16	6	6	3	2	..	..	..
Stony Plain	M	..	..	5	4	..	..	..	1	..	..	..	10
	F	..	7	3	..	..	..	..	..	..	..	..
Sturgeon	M	..	..	4	4	4	1	..	..	2	1	..	16
	F	..	8	2	2	2	..	..	..	2	..	..
Taber	M	..	2	22	25	8	3	1	..	..	..	..	61
	F	..	24	25	9	2	1	..	..	..	..	..
Vegreville	M	..	2	78	48	13	7	2	..	3	..	..	153
	F	..	93	37	11	4	3	3	1	1	..	..
Vermilion	M	..	1	13	19	7	4	2	1	..	..	..	47
	F	..	18	17	7	1	4	..	..	..	..	..
Victoria	M	..	..	19	31	6	1	2	1	..	1	..	61
	F	1	31	17	7	2	..	2	1	..	..	..
Wainwright	M	..	..	10	17	11	4	3	..	..	..	..	45
	F	..	13	21	8	..	3	..	..	..	..	..

MARRIAGES by Ages in Electoral Districts, 1915.—(Continued).

		Ages.												
ELECTORAL DISTRICTS		Sex	Under 15	15—19	20—24	25—29	30—34	35—39	40—44	45—49	50—59	60 and over	Not stated	Total
Warner	M	..	..	..	..	1	2	..	..	..	..	..	..	3
	F	..	..	12	..	1	..	..	..	..	..	..	..
Wetaskiwin	M	..	..	..	16	22	9	5	4	3	1	..	..	60
	F	..	13	25	13	4	2	1	1	1	..	..	..
Whitford	M	..	..	1	15	33	12	6	1	2	..	..	..	70
	F	1	21	7	30	3	3	3	3	..	2	..	..
Calgary City	M	..	..	11	255	350	224	100	31	15	11	3	..	1000
	F	..	94	308	304	178	69	31	11	5	..	..	..
Edmonton City ..	M	..	..	21	260	380	151	72	29	17	12	6	..	948
	F	..	180	383	198	93	59	20	9	6	..	..	..
Lethbridge City..	M	..	..	1	66	74	37	8	5	3	3	1	..	198
	F	..	54	82	37	11	9	3	..	2	..	..	..
Med. Hat City ...	M	..	..	35	45	55	20	10	3	1	1	1	..	171
	F	..	50	66	24	16	8	3	3	1	..	..	..
Totals.....				4 1289	2641	2358	1150	521	221	113	87	20	..	4202

MARRIAGES—Country of Origin of Contracting Parties.

BRIDES.	English Speaking Countries.				Bridegrooms.							Total
	English Speaking Countries.				Foreign Countries.							
	Canada	Britain	U. S. A.	Total	France	Russia	Scandinavia	Austria	Germany	Italy	Others		Not Stated
1232 Canadian Brides married	678	248	242	1,168	5	13	7	14	6	1	18	64
1183 British Brides married	220	805	122	1,147	1	4	10	1	1	1	18	36
1067 U. S. A. Brides married	300	164	508	972	2	12	45	5	20	..	11	95
3482 Total English Speaking Countries	1,198	1,217	872	3,287	8	29	62	20	27	2	47	195
17 French Brides married	2	2	5	9	6	..	..	..	..	..	2	8
151 Russian Brides married	8	3	16	27	..	112	..	3	5	1	3	124
102 Scandinavian Brides married	11	7	20	38	..	1	60	1	2	..	..	64
343 Austrian Brides married	7	2	6	15	1	11	1	309	3	1	2	328
4 Italian Brides married	..	..	..	..	..	..	..	..	..	4	4	4
46 German Brides married	4	1	15	20	..	2	1	3	14	1	5	26
55 Others	5	10	5	20	3	4	2	..	..	..	26	35
2 Not Stated	1	..	1	2	..	..	..	..	..	..	..	..
4202 Total	1,236	1,242	940	3,418	18	159	126	336	51	9	85	784

REGISTRATIONS BY ELECTORAL DISTRICTS, 1915.

DEATHS.

	Sex			Under One Year	
	Male	Female	Total	Male	Female
Acadia	34	28	62	13	6
Alexandra	5	16	21	..	6
Athabasca	23	18	41	8	4
Beaver River	26	27	53	14	8
Bow Valley	9	5	14	1	1
Calgary North (excluding city) ..	..	..	..	..	..
Calgary South (excluding city) ..	1	..	1	..	..
Camrose	38	33	71	9	11
Cardston	18	9	27	9	2
Claresholm	14	5	19	4	1
Clearwater	4	4	8	1	..
Cochrane	14	10	24	1	1
Coronation	28	22	50	4	7
Didsbury	28	37	65	15	10
Edmonton South	18	3	21	2	1
Edson	21	7	28	4	0
Gleichen	21	12	33	6	4
Grouard	22	19	41	8	7
Hand Hills	29	29	58	11	22
High River	14	4	18	5	4
Innisfail	14	9	23	4	3
Lacombe	22	21	43	3	5
Lac Ste. Anne	15	13	28	3	1
Leduc	21	16	37	9	8
Lethbridge District	14	7	21	8	2
Little Bow	18	13	31	4	3
Macleod	22	10	32	2	3
Medicine Hat District	32	28	60	11	11
Nanton	17	7	24	6	6
Okotoks	13	8	21	4	1
Olds	24	26	50	4	10
Peace River	18	7	25	4	1
Pembina	14	16	30	2	2
Pincher Creek	13	16	29	5	2
Ponoka	43	24	67	9	6
Redcliff	10	17	27	4	7
Red Deer	25	21	46	4	4
Ribstone	28	20	48	11	4
Rocky Mountain	34	27	61	11	23
St. Albert	27	15	42	8	6
St. Paul	25	21	46	9	11
Sedgewick	34	29	63	13	10
Stettler	42	25	67	9	10
Stony Plain	20	8	28	7	3
Sturgeon	45	29	74	15	13
Taber	23	27	50	11	7
Vegreville	73	37	110	24	14
Vermilion	38	29	67	11	11
Victoria	38	27	65	15	6
Wainwright	24	17	41	7	4
Warner	11	7	18	4	3
Wetaskiwin	19	18	37	1	3
Whitford	51	35	86	26	17
Calgary City	365	271	636	148	84
Edmonton City	323	268	591	102	84
Lethbridge City	70	35	105	23	11
Medicine Hat City	62	42	104	21	12
Totals	2054	1534	3588	677	506

REGISTRATIONS BY ELECTORAL DISTRICTS, 1915, BY MONTHS.

DEATHS.

Electoral Districts	Months												Total
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Acadia	12	5	5	1	12	4	4	6	6	5	10	6	62
Alexandra	1	5	3	1	1	1	2	1	0	1	2	3	21
Athabasca	1	5	3	5	5	5	3	2	3	4	3	3	41
Beaver River	1	3	5	12	12	6	6	6	4	3	6	9	53
Bow Valley	2	1	1	1	2	1	4	1	1	1	1	1	14
Calgary N. (excluding city)	1	1	1	1	1	1	1	1	1	1	1	1	1
Calgary S. (excluding city)	1	1	1	1	1	1	1	1	1	1	1	1	1
Camrose	4	2	5	9	8	8	3	8	7	4	6	7	71
Cardston	3	3	10	1	1	2	2	1	2	1	1	3	27
Claresholm	1	3	1	1	3	3	1	2	2	1	2	2	19
Clearwater	3	1	1	1	1	1	1	1	1	1	1	1	8
Cochrane	4	4	3	1	3	1	5	2	2	2	1	1	24
Coronation	2	7	3	6	5	5	2	3	7	3	6	1	50
Didsbury	8	6	9	10	6	4	8	1	2	2	6	3	65
Edmonton South	1	1	2	1	1	1	5	2	5	1	2	1	21
Edson	3	6	3	2	1	1	4	1	1	3	2	4	28
Gleichen	6	2	2	1	5	1	3	4	2	1	4	2	33
Grouard	4	4	5	1	1	3	2	8	1	3	2	2	41
Hand Hills	2	10	6	3	6	3	1	6	9	3	7	2	58
High River	1	2	2	1	1	1	2	2	2	1	2	2	18
Innisfail	2	2	5	1	2	1	1	1	1	1	2	1	23
Lacombe	5	4	1	1	2	3	3	3	5	7	3	3	43
Lac Ste. Anne	2	2	3	2	4	2	3	1	1	4	2	2	28
Leduc	4	1	6	5	2	4	0	3	0	5	3	4	37
Lethbridge District	1	2	3	1	1	1	3	5	1	2	2	2	21
Little Bow	1	4	2	4	3	4	2	2	3	1	4	1	31
Macleod	3	4	4	5	2	1	4	1	1	2	1	5	32
Medicine Hat District	5	6	4	5	4	4	9	3	5	6	5	4	60
Nanton	6	2	1	2	2	1	1	3	3	3	1	2	24
Okotoks	3	3	2	1	1	3	2	2	2	1	2	1	21
Olds	7	8	2	3	5	4	7	3	1	2	2	6	50
Peace River	1	2	3	1	1	1	3	3	3	2	2	4	25
Pembina	2	3	4	1	2	1	1	1	4	2	1	2	30
Pincher Creek	6	4	5	1	1	1	1	1	3	1	4	4	29
Ponoka	5	2	5	6	6	10	9	6	8	3	6	1	67
Redcliff	2	2	1	4	2	3	3	2	1	6	1	1	27
Red Deer	1	1	2	8	4	3	4	7	3	6	3	4	46
Ribstone	2	2	5	9	8	4	2	6	2	4	1	3	48
Rocky Mountain	12	3	3	7	2	4	5	3	3	9	3	7	61
Sedgewick	1	5	6	1	3	5	1	3	9	4	2	2	42
St. Albert	1	2	6	8	4	2	2	9	6	1	5	1	46
St. Paul	8	2	7	6	4	3	5	5	6	4	5	10	63
Stettler	6	6	7	6	4	5	5	5	5	8	7	3	67
Stony Plain	3	3	3	3	3	3	1	1	2	1	5	1	28
Sturgeon	7	2	9	6	9	7	4	6	8	8	2	6	74
Taber	4	5	6	3	5	9	5	1	1	2	4	5	50
Vegreville	14	8	8	2	9	8	6	13	12	12	4	14	110
Vermilion	10	7	4	5	11	9	5	4	4	1	2	5	67
Victoria	7	5	10	5	3	7	4	5	3	12	2	2	65
Wainwright	3	3	1	8	6	2	3	5	1	4	2	3	41
Warner	1	1	3	1	1	4	2	2	1	1	2	1	18
Wetaskiwin	4	3	1	5	3	2	5	2	6	2	2	3	37
Whitford	10	7	14	8	8	11	2	5	8	8	5	1	86
Calgary City	56	43	52	56	37	47	55	53	97	61	6	72	636
Edmonton City	52	32	52	37	17	32	123	66	13	52	48	67	591
Medicine Hat City	15	7	12	5	9	8	7	14	4	1	7	16	105
Lethbridge City	10	15	15	10	7	7	7	11	1	1	2	19	104
Totals	329	281	343	304	248	271	358	321	289	286	223	335	3588

42. Cancer and other Malignant Tumors of the Female Genital Organs....	..	..	..	4	5	4	3	..	..	16	16
43. Cancer and other Malignant Tumors of the Breast .....	..	..	..	1	7	3	..	..	..	11	11
44. Cancer of the Skin .....	..	..	..	..	..	..	..	..	..	..	..
45. Cancer and other Malignant Tumors of other organs and organs not specified .....	..	..	..	..	..	1	2	..	1	2	3
46. Other Tumors (Tumors of the Female Genital Organs excepted).....	..	..	3	8	12	11	7	19	22	41	..
47. Acute Articular Rheumatism .....	..	..	..	5	3	1	1	3	7	10	..
48. Chronic Rheumatism and Gout	2	5	2	4	1	2	..	5	11	16	..
49. Scurvy .....	..	..	1	..	2	2	3	4	4	8	..
50. Diabetes .....	..	2	..	..	..	..	..	1	1	2	..
51. Exophthalmic Goitre .....	..	3	2	8	6	4	2	15	10	25	..
52. Addison's Disease .....	..	..	..	3	5	..	..	..	8	8	..
53. Leuchaemia .....	..	..	..	..	1	..	..	..	1	1	..
54. Anaemia Chlorosis	3	..	..	2	7	10	4	12	14	26	..
55. Other General Diseases	3	1	..	1	2	1	..	3	5	8	..
56. Alcoholism (Acute or Chronic) .....	..	..	2	1	5	..	..	6	2	8	..
57. Chronic Lead Poisoning .....	..	..	..	..	..	..	..	..	..	..	..

II.—DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.

60. Encephalitis	3	..	1	2	5	1	..	..	9	3	12
61. Simple Meningitis	22	9	5	1	..	1	1	..	22	17	39
62. Locomotor Ataxia .....	..	..	..	..	..	..	..	..	..	..	..
63. Other Diseases of the Spinal Cord	1	1	1	..	3	3	4	..	7	6	13
64. Cerebral Hemorrhage	8	1	1	2	12	21	19	17	48	33	81
65. Softening of the Brain .....	..	..	..	..	..	..	..	..	..	..	..
66. Paralysis without Specified Causes .....	..	..	2	1	3	9	7	10	20	12	32
67. General Paralysis of the Insane .....	..	..	..	..	6	7	1	..	12	2	14
68. Other Forms of Mental Alienation .....	..	..	..	1	2	..	..	..	1	2	3
69. Epilepsy .....	..	2	4	5	1	1	..	9	4	13	..
70. Convulsions (Non-Puerperal) .....	..	14	1	2	1	1	..	6	13	19	..
71. Convulsions of Infants	55	..	..	..	..	..	..	34	21	55	..
72. Chorea .....	..	..	..	..	..	..	..	..	..	..	..
73. Neuralgia and Neuritis .....	..	..	..	..	1	..	..	..	1	1	..
74. Other Diseases of the Nervous System .....	..	..	..	..	..	..	..	..	..	..	..
75. Diseases of the Eyes and their Annexa .....	..	..	..	..	..	..	..	..	..	..	..
76. Diseases of the Ears	1	2	1	2	2	2	..	6	4	10	..

DEATHS DURING THE YEAR 1915, BY AGES AND SEXES.—(Continued)

DISEASES.	AGE.							SEX.				
	Under 1	1—4	5—14	15—24	25—44	45—59	60—69	70 and over	Not specified	Male	Female	Total
III.—DISEASES OF THE CIRCULATORY SYSTEM.												
77. Pericarditis	1	..	4	1	2	1	1	2	..	10	2	12
78. Acute Endocarditis	2	4	3	5	7	19	19	11	..	36	44	80
79. Other Diseases of the Heart	10	3	2	5	39	42	28	29	1	98	61	159
80. Angina Pectoris .....	..	..	..	..	4	5	1	3	..	7	6	13
81. Diseases of the Arteries, Atheroma, Aneurysm, etc. ....	..	..	..	1	3	8	11	10	1	26	34	60
82. Embolism and Thrombosis	1	1	1	1	6	1	1	1	..	3	9	12
83. Diseases of the Veins (Varicos, Hemorrhoids, Phlebitis, etc.) ..	..	..	..	..	2	..	..	..	..	1	1	2
84. Diseases of the Lymphatic System	1	1	1	..	..	..	..	..	..	..	2	5
85. Hemorrhage, other diseases of the Circulatory System	2	1	1	..	3	3	..	1	..	7	3	10
IV.—DISEASES OF THE RESPIRATORY SYSTEM.												
86. Diseases of the Naval Fossae .....	..	..	..	..	1	..	..	..	..	..	1	1
87. Diseases of the Larynx .....	..	1	..	..	1	1	..	..	..	3	..	3
88. Diseases of the Thyroid Body	1	..	..	..	..	..	..	..	..	1	..	1
89. Acute Bronchitis	19	8	..	1	1	..	2	6	..	24	13	37
90. Chronic Bronchitis .....	..	..	..	..	..	..	..	..	..	..	..	..
91. Bronchopneumonia	61	17	2	..	4	5	5	4	..	52	46	98
92. Pneumonia	90	22	12	7	34	17	13	18	1	128	86	214
93. Pleurisy .....	..	..	2	2	3	..	2	1	..	8	2	10
94. Pulmonary Congestion, Pulmonary Apoplexy	7	1	1	1	1	3	..	2	..	9	7	16
95. Gangrene of the Lung .....	..	..	..	..	..	..	..	..	..	..	..	..
96. Asthma .....	..	..	..	..	3	4	2	3	..	7	5	12
98. Other Diseases of the Respiratory System (Tuberculosis excepted) ..	13	3	..	1	2	3	3	..	..	10	15	25

DISEASES.

V.—DISEASES OF THE DIGESTIVE SYSTEM.

99. Diseases of the Mouth and Annexa	1	1	..	..	1	..	..	..	2	1	3
100. Diseases of the Pharynx .....	..	..	3	1	..	..	..	..	..	2	5
101. Diseases of the Esophagus .....	..	..	..	..	..	..	..	..	..	..	..
102. Ulcer of the Stomach	3	..	1	..	4	1	1	..	4	6	10
103. Other Diseases of the Stomach (Cancer excepted)	37	9	4	1	7	2	4	1	..	34	65
104. Diarrhoea and Enteritis	108	27	2	..	3	2	1	3	..	90	146
107. Intestinal Parasites .....	..	..	..	..	..	..	..	..	..	..	..
108. Appendicitis and Typhlitis	2	2	12	6	13	5	..	..	..	29	40
109. Hernia, Intestinal Obstruction	7	6	2	2	5	5	1	2	..	14	30
110. Other Diseases of the Intestines	13	3	3	..	4	4	1	2	..	15	30
111. Acute Yellow Atrophy of the Liver .....	..	..	..	..	..	..	..	..	..	..	..
113. Cirrhosis of the Liver .....	..	1	1	..	4	7	2	..	..	5	10
114. Biliary Calculi .....	..	..	..	..	2	..	1	..	..	3	4
115. Other Diseases of the Liver .....	..	1	..	..	5	8	2	1	..	11	6
116. Diseases of the Spleen .....	..	..	..	..	1	1	..	..	..	2	1
117. Simple Peritonitis (Non-Puerperal)	1	..	..	..	1	1	..	..	..	..	..
118. Other Diseases of the Digestive System (Cancer and Tuberculosis excepted)	3	1	8	6	8	3	1	..	..	15	30
	5	3	..	1	..	..	..	..	..	3	9

VI.—NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA.

119. Acute Nephritis	6	1	1	1	8	7	5	8	..	23	14	37
120. Bright's Disease	3	2	2	4	12	20	13	15	..	44	27	71
122. Other Diseases of the Kidneys and Annexa .....	..	..	..	1	4	3	2	2	..	7	7	14
123. Calculi of the Urinary Passages .....	..	..	..	..	2	1	..	..	..	3	1	4
124. Diseases of the Bladder .....	..	..	..	..	1	..	1	1	..	4	..	4
125. Diseases of the Urethra, Urinary Abscess, etc. ....	..	..	..	..	..	..	..	..	..	..	..	..
126. Diseases of the Prostate .....	..	..	..	..	..	..	..	..	..	..	..	..
127. Nonvenereal Diseases of the Male Genital Organs ..	..	..	..	..	..	1	3	1	..	5	..	5
128. Uterine Hemorrhage .....	..	..	..	..	..	..	..	..	..	..	..	..
129. Uterine Tumor (Non-cancerous) .....	..	..	..	..	1	..	..	..	..	..	1	1
130. Other Diseases of the Uterus .....	..	..	..	..	..	..	..	..	..	..	..	..
131. Cysts and Other Tumors of the Ovary .....	..	..	..	..	..	..	..	..	..	..	..	..
132. Salpingitis and Other Diseases of the Female Genital Organs	1	..	..	1	..	2	..	..	..	..	4	4

DEATHS DURING THE YEAR 1915, BY AGES AND SEXES.—(Continued)

DISEASES.	AGE.							SEX.		
	Under 1	1—4	5—14	15—24	25—44	45—59	60—69	70 and over	Not specified	Total
VII.—THE PUERPERAL STATE.										
133. Nonpuerperal Diseases of the Breast	..	..	..	..	3	8	..	..	..	11
134. Accidents of Pregnancy	..	..	..	..	1	8	..	..	..	9
135. Puerperal Hemorrhage	..	..	..	..	..	..	..	..	..	..
136. Other Accidents of Labor	..	..	..	..	..	..	..	..	..	..
137. Puerperal Septicemia	..	..	..	..	6	11	..	..	..	17
138. Puerperal Albuminuria and Convulsions	..	..	..	..	7	14	1	..	..	22
139. Puerperal Phlegmasia, Alba Dolens, Embolus, Sudden Death	..	..	..	..	2	8	..	..	..	10
140. Following Childbirth (Not Otherwise Defined)	..	..	..	2	7	..	..	..	..	9
141. Puerperal Diseases of the Breast	..	..	..	..	..	..	..	..	..	..
VIII.—DISEASES OF THE SKIN AND OF THE CELLULAR TISSUE.										
142. Gangrene	1	..	..	..	..	..	..	1	..	2
144. Acute Abscess	4	..	..	..	2	..	2	2	..	10
145. Other Diseases of the Skin and Annexa	3	..	..	..	..	1	1	..	..	5
IX.—DISEASES OF THE BONES AND OF THE ORGANS OF LOCOMOTION.										
146. Diseases of the Bones (Tuberculosis Excepted)	4	..	..	..	..	3	..	..	..	7
148. Amputations	..	..	..	..	..	..	..	..	..	..
149. Other Diseases of the Organs of Locomotion	..	..	..	..	..	..	..	..	..	..
X.—MALFORMATIONS.										
150. Congenital Malformations (Stillbirths Not Included)	50	1	..	..	..	..	..	..	28	51

XVI.—DISEASES OF EARLY INFANCY.

151.	Congenital Debility, Isterus, Sclerema, Premature Birth	432	250	182	432
152.	Other Diseases Peculiar to Early Infancy	131	77	54	131
153.	Lack of Care				

XII.—OLD AGE.

[illegible]

XIII.—AFFECTIONS PRODUCED BY EXTERNAL CAUSES.

[illegible]

DEATHS DURING THE YEAR 1915, BY AGES AND SEXES.—(Continued)

DISEASES.	AGE.							SEX.		
	Under 1	1-4	5-14	15-24	25-44	45-59	60-69	70 and over	Not specified	Total
184. Homicide	1	..	..	2	9	2	..	1	11	4
185. Fractures (Cause Not Specified)	1	..	3	4	13	5	1	2	1	30
186. Other External Causes, Legal Hanging	4	4	1	6	5	1	1	..	17	23
XIV.—ILL-DEFINED DISEASES.										
187. Ill-defined Organic Diseases .....	..	4	1	1	2	..	..	1	..	11
188. Sudden Death .....	..	..	..	1	1	1	3	..	1	6
189. Cause of Death Not Specified, or Ill-defined	8	1	1	6	5	4	3	1	..	29
Totals.....	1213	265	201	276	650	409	256	311	7	3588

DEATHS DURING THE YEAR 1915, BY MONTHS.—(Continued)

DISEASES.

	January	February	March	April	May	June	July	August	September	October	November	December	Total
45. Cancer and other Malignant Tumors of other organs not specified	..	3	5	3	5	4	7	5	2	3	..	4	41
46. Other Tumors (Tumors of the Female Genital Organs excepted)	1	1	2	..	1	1	..	2	..	2	..	..	10
47. Acute Articular Rheumatism	2	..	2	2	1	3	..	..	2	1	1	1	16
48. Chronic Rheumatism and Gout	1	..	..	3	1	..	..	..	1	1	1	1	8
49. Scurvy	..	..	..	..	1	1	..	..	..	..	1	..	2
50. Diabetes	3	2	2	3	3	1	4	..	1	3	..	3	25
51. Exophthalmic Goitre	..	..	1	..	1	..	1	1	2	2	..	..	8
52. Addison's Disease	..	..	..	..	..	..	..	1	..	..	..	..	1
53. Leuchaemia	1	1	1	1	1	3	2	5	3	2	2	2	3
54. Anaemia Chlorosis	1	3	1	1	1	3	2	5	3	1	1	..	26
55. Other General Diseases	..	..	1	2	..	2	2	..	1	1	1	..	8
56. Alcoholism (Acute or Chronic)	2	1	1	..	1	1	1	..	..	1	1	..	8
57. Chronic Lead Poisoning	..	..	..	..	..	..	..	..	..	..	..	..	..
II.—DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.	1	..	..	..	..	..	..	..	..	..	..	..	..
60. Encephalitis	2	..	..	..	..	..	1	1	2	3	3	..	12
61. Simple Meningitis	8	1	2	2	3	2	4	1	6	2	3	5	39
62. Locomotor Ataxia	..	..	..	..	..	..	..	..	..	..	..	..	..
63. Other Diseases of the Spinal Cord	1	1	4	2	..	..	2	1	..	..	1	1	13
64. Cerebral Hemorrhage	4	11	11	6	2	5	9	4	7	6	7	9	81
65. Softening of the Brain	..	..	..	..	..	..	..	..	..	..	..	..	..
66. Paralysis without Specified Causes	1	3	1	2	2	2	5	4	1	5	3	3	32
67. General Paralysis of the Insane	2	..	..	..	..	2	2	3	1	1	3	..	14
68. Other Forms of Mental Alienation	..	..	..	1	..	1	..	..	..	..	1	..	3
69. Epilepsy	5	..	2	1	..	..	1	1	1	2	..	1	13
70. Convulsions (Non-Puerperal)	4	1	3	2	..	2	1	2	1	1	1	1	19
71. Convulsions of Infants	9	5	1	3	3	7	6	2	9	1	3	6	55

[illegible]

III.—DISEASES OF THE CIRCULATORY SYSTEM.

77.	Pericarditis	2	..	2	1	..	1	..	1	2	..	2	1	12
78.	Acute Endocarditis	17	15	24	3	8	9	28	11'	10	6	10	5	13
79.	Other Diseases of the Heart	3	1	..	1	1	1	1	1	1	1	1	1	159
80.	Angina Pectoris	3	1	..	1	1	1	1	1	1	1	1	1	3
81.	Diseases of the Arteries, Aneurysm, etc.	1	4	4	3	2	1	1	..	1	3	4	10	34
82.	Embolism and Thrombosis	2	..	..	..	1	..	2	..	2	..	2	..	12
83.	Diseases of the Veins (Varicos, Hemorrhoids, Phlebitis, etc.) ..	..	..	..	..	1	..	1	..	..	..	..	1	2
84.	Diseases of the Lymphatic System .....	..	..	..	..	1	..	..	..	..	..	..	1	2
85.	Hemorrhage, other diseases of the Circulatory System .....	..	..	..	2	1	..	1	..	..	4	..	3	10

IV.—DISEASES OF THE RESPIRATORY SYSTEM.

[illegible]

V.—DISEASES OF THE DIGESTIVE SYSTEM.

[illegible]

DEATHS DURING THE YEAR 1915, BY MONTHS.—(Continued)

DISEASES.

	January	February	March	April	May	June	July	August	September	October	November	December	Total
104. Diarrhoea and Enteritis	9	11	14	9	33	6	10	28	29	16	6	5	146
107. Intestinal Parasites .....	..	..	..	..	..	..	..	..	..	..	..	..	..
108. Appendicitis and Typhlitis	5	3	3	3	3	5	4	3	2	4	2	3	40
109. Hernia, Intestinal Obstruction	3	2	3	2	4	2	3	3	1	4	1	5	30
110. Other Diseases of the Intestines	2	2	4	2	2	1	1	4	4	3	1	4	30
111. Acute Yellow Atrophy of the Liver .....	..	..	..	..	..	1	..	..	..	..	..	..	1
113. Cirrhosis of the Liver	1	1	2	..	..	2	1	2	..	4	1	1	15
114. Biliary Calculi	1	1	..	..	1	..	..	..	1	..	..	..	4
115. Other Diseases of the Liver	1	..	2	3	2	2	1	..	..	2	2	2	17
116. Diseases of the Spleen .....	..	..	..	..	..	1	1	..	1	..	..	..	3
117. Simple Peritonitis (Non-Puerperal) .....	..	1	1	2	2	3	8	2	3	3	2	3	30
118. Other Diseases of the Digestive System (Cancer and Tuberculosis excepted) .....	..	1	..	1	..	3	3	..	1	..	..	..	9
VI.—NON-GENITAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA.													
119. Acute Nephritis	3	7	1	4	5	2	..	4	1	6	3	1	37
120. Bright's Disease	3	4	4	6	2	5	5	10	13	6	5	8	71
122. Other Diseases of the Kidneys and Annexa	1	1	3	3	..	1	..	2	1	..	..	2	14
123. Calculi of the Urinary Passages	1	1	..	..	..	..	1	1	1	..	..	..	4
124. Diseases of the Bladder .....	..	..	1	..	..	..	..	1	1	..	..	1	4
125. Diseases of the Urethra, Urinary Abscess, etc. ....	..	..	..	..	..	..	..	..	..	..	..	..	..
126. Diseases of the Prostate	1	1	1	1	1	1	..	..	..	..	..	..	5
127. Nonvenereal Diseases of the Male Genital Organs .....	..	..	..	..	..	..	..	..	..	..	..	..	..
128. Uterine Hemorrhage .....	..	..	..	..	..	..	..	..	..	..	1	..	1
129. Uterine Tumor (Non-cancerous) .....	..	..	..	..	..	..	..	..	..	..	..	..	..
130. Other Diseases of the Uterus .....	..	..	..	..	..	..	..	..	..	..	..	..	..
131. Cysts and Other Tumors of the Ovary .....	..	..	..	..	..	..	..	..	..	..	..	..	..
132. Salpingitis and Other Diseases of the Female Genital Organs	1	..	1	..	..	..	1	..	..	..	..	1	4

DEATHS DURING THE YEAR 1915, BY MONTHS.—(Continued)

DISEASES.

	January	February	March	April	May	June	July	August	September	October	November	December	Total
158. Suicide by Drowning			1				1	2					4
159. Suicide by Firearms		3	3			2	1	1		1	7	4	24
160. Suicide by Cutting or Piercing Instruments		1		1		1							3
161. Suicide by Jumping from High Places													
162. Suicide by Crushing													
163. Other Suicides										2	1	1	4
164. Poisoning by Food													
165. Other Acute Poisonings	1	1	1	1			2	1		1			8
166. Conflagration					1								1
167. Burns	2	1	2	7	1	2	3	3	4		6	1	32
168. Absorption of Deleterious Gases		5	1			2	1	1					11
169. Accidental Drowning			1	3	4	9	13	22	1	2			55
170. Traumatism by Firearms			1	2	1	2	1		6	1	2	1	19
171. Traumatism by Cutting or Piercing Instruments													
172. Traumatism by Fall			1		3	2	1		3	2	2		15
173. Traumatism in Mines or Quarries	1		1	2					1	2	1		10
174. Traumatism by Machines	1	1	1	1		1	1	3	1	2	3	3	13
175. Traumatism by Other Crushing (Vehicles, Railroad, Landslides, etc.)	1		2	3	1	3	1	2	5	3		3	24
176. Injuries by Animals					2	2	1	1	1			2	9
177. Starvation													
178. Excessive Cold	1												1
179. Effects of Heat							1	1					2
180. Lightning			2					4					6
181. Electricity (Lightning Excepted)													
184. Homicide	1	1			2		3	1		4	1		15
185. Fractures (Cause Not Specified)	1	1		1	2	2	10	4	2	5	1	1	30
186. Other External Causes, Legal Hanging	1	2	3	2	2	3	1	2	1		5		23

XIV.—ILL-DEFINED DISEASES.

187. Ill-defined Organic Diseases	1	1	3	1	2	1	1	..	..	11
188. Sudden Death	1	..	1	..	..	1	1	1	1	6
189. Cause of Death Not Specified, or Ill-defined	3	3	2	5	2	1	8	1	1	29
Totals	329	281	343	304	248	271	358	321	289	3588

42. Cancer and other Malignant Tumors of the Female Genital Organs....	5	4	5	..	..	..	1	1	..	..	..	16
43. Cancer and other Malignant Tumors of the Breast	6	3	2	..	..	..	..	..	..	..	..	11
44. Cancer of the Skin .....	..	1	1	..	..	..	..	1	..	..	..	3
45. Cancer and other Malignant Tumors of other organs and organs not specified	14	13	5	..	..	..	1	2	3	1	1	41
46. Other Tumors (Tumors of the Female Genital Organs excepted)	5	1	..	..	..	..	..	1	..	1	2	10
47. Acute Articular Rheumatism	6	5	2	..	..	..	..	2	..	..	..	16
48. Chronic Rheumatism and Gout	2	3	2	..	..	..	..	1	..	..	..	8
49. Scurvy	2	..	..	..	..	..	..	..	..	..	..	2
50. Diabetes	12	6	5	..	..	..	1	1	..	..	..	25
51. Exophthalmic Goitre	1	5	1	..	..	..	..	1	..	..	..	8
52. Addison's Disease	1	..	..	..	..	..	..	..	..	..	..	1
53. Leukaemia	1	1	..	..	..	..	..	1	..	..	..	3
54. Anaemia Chlorosis	16	5	4	..	..	..	..	1	..	..	..	26
55. Other General Diseases	6	1	..	..	..	..	..	..	1	..	..	8
56. Alcoholism (Acute or Chronic)	4	3	..	..	..	..	..	1	..	..	..	8
57. Chronic Lead Poisoning .....	..	..	..	..	..	..	..	..	..	..	..	..

II.—DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.

60. Encephalitis	5	2	4	..	..	..	..	1	..	..	..	12
61. Simple Meningitis	32	3	1	..	1	..	..	1	..	..	..	39
62. Locomotor Ataxia .....	..	..	..	..	..	..	..	..	..	..	..	..
63. Other Diseases of the Spinal Cord	6	2	3	..	..	..	..	..	1	..	..	13
64. Cerebral Hemorrhage	37	16	14	..	..	..	4	5	..	4	..	81
65. Softening of the Brain .....	..	..	..	..	..	..	..	..	..	..	..	..
66. Paralysis without Specified Causes	11	6	4	..	..	..	1	4	..	3	2	32
67. General Paralysis of the Insane	4	5	3	..	..	..	1	..	..	1	..	14
68. Other Forms of Mental Alienation .....	..	1	1	..	..	..	..	..	..	..	..	3
69. Epilepsy	6	1	3	..	..	..	..	2	..	1	..	13
70. Convulsions (Non-Puerperal)	14	1	2	..	..	..	..	..	..	..	..	19
71. Convulsions of Infants	55	..	..	..	..	..	..	..	..	..	..	55
72. Chorea .....	..	..	..	..	..	..	..	..	..	..	..	..
73. Neuralgia and Neuritis .....	..	..	1	..	..	..	..	..	..	..	..	1
74. Other Diseases of the Nervous System .....	..	..	..	..	..	..	..	..	..	..	..	..
75. Diseases of the Eyes and their Annexa .....	..	..	..	..	..	..	..	..	..	..	..	..
76. Diseases of the Ears	7	1	1	..	..	..	..	1	..	..	..	10

DEATHS DURING THE YEAR 1915, BY NATIONALITIES.—(Continued)

DISEASES.	NATIONALITIES.									
	Canada	United Kingdom	United States	Italy	France	Russia	Scandinavia	Austria	Germany	Others
III.—DISEASES OF THE CIRCULATORY SYSTEM.										
77. Pericarditis	5	1	4	..	..	..	..	1	..	1
78. Acute Endocarditis	24	28	14	..	..	..	3	2	3	1
79. Other Diseases of the Heart	59	40	26	..	1	5	7	9	1	6
80. Angina Pectoris	4	6	2	..	..	..	..	..	..	..
81. Diseases of the Arteries, Atheroma, Aneurysm, etc.	10	10	6	..	..	1	2	2	3	..
82. Embolism and Thrombosis	5	4	1	..	..	..	1	..	1	..
83. Diseases of the Veins (Varicos, Hemorrhoids, Phlebitis, etc.) ..	..	2	..	..	..	..	..	..	..	..
84. Diseases of the Lymphatic System	1	1	..	..	..	..	..	..	..	..
85. Hemorrhage, other diseases of the Circulatory System	7	2	..	..	..	1	..	..	..	..
IV.—DISEASES OF THE RESPIRATORY SYSTEM.										
86. Diseases of the Naval Fossae	1	..	..	..	..	..	..	..	..	..
87. Diseases of the Larynx	3	..	..	..	..	..	..	..	..	..
88. Diseases of the Thyroid Body	1	..	..	..	..	..	..	..	..	..
89. Acute Bronchitis	30	2	..	..	1	2	..	..	1	1
90. Chronic Bronchitis .....	..	..	..	..	..	..	..	..	..	..
91. Bronchopneumonia	81	10	4	..	..	1	2	..	..	..
92. Pneumonia	137	34	19	..	..	3	5	8	3	1
93. Pleurisy	7	2	..	..	..	..	..	..	..	..
94. Pulmonary Congestion, Pulmonary Apoplexy	10	3	..	..	..	..	..	2	..	1
95. Gangrene of the Lung .....	..	..	..	..	..	..	..	..	..	..
96. Asthma	4	6	..	..	..	1	..	1	..	..
98. Other Diseases of the Respiratory System (Tuberculosis excepted) ..	19	3	..	..	..	..	..	3	..	..
Total										
	512	180	159	13	34	12	2	2	10	25

V.—DISEASES OF THE DIGESTIVE SYSTEM.

99. Diseases of the Mouth and Annexa	2	1	4	1	3
100. Diseases of the Pharynx	4	1	..	..	5
101. Diseases of the Esophagus .....	..	..	..	..	..
102. Ulcer of the Stomach	5	4	..	1	10
103. Other Diseases of the Stomach (Cancer excepted)	52	3	5	1	65
104. Diarrhoea and Enteritis	141	4	..	1	146
107. Intestinal Parasites .....	..	..	..	..	..
108. Appendicitis and Typhlitis	18	7	11	1	40
109. Hernia, Intestinal Obstruction	18	3	5	1	30
110. Other Diseases of the Intestines	20	6	1	1	30
111. Acute Yellow Atrophy of the Liver	1	..	..	..	1
113. Cirrhosis of the Liver	4	4	3	1	15
114. Biliary Calculi	1	2	..	1	4
115. Other Diseases of the Liver	8	3	3	2	17
116. Diseases of the Spleen	2	..	1	..	3
117. Simple Peritonitis (Non-Puerperal)	13	7	6	2	30
118. Other Diseases of the Digestive System (Cancer and Tuberculosis excepted)	9	..	..	..	9

VI. NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND

ANNEXA.

119. Acute Nephritis	20	5	4	2	37
120. Bright's Disease	30	18	13	5	71
122. Other Diseases of the Kidneys and Annexa	7	1	3	1	14
123. Calculi of the Urinary Passages	3	1	..	..	4
124. Diseases of the Bladder	2	1	1	..	4
125. Diseases of the Urethra, Urinary Abscess, etc. ....	..	..	..	..	..
126. Diseases of the Prostate	3	1	..	..	5
127. Nonvenereal Diseases of the Male Genital Organs .....	..	..	..	..	..
128. Uterine Hemorrhage .....	..	..	..	..	..
129. Uterine Tumor (Non-cancerous)	1	..	..	..	1
130. Other Diseases of the Uterus .....	..	..	..	..	..
131. Cysts and Other Tumors of the Ovary .....	..	..	..	..	..
132. Salpingitis and Other Diseases of the Female Genital Organs	2	2	..	..	4

XI—DISEASES OF EARLY INFANCY.

151.	Concentric Deblity, Isterus, Sclerema, Premature Birth	492	..	..	..	..	432
152.	Other Diseases Peculiar to Early Infancy	131	..	..	..	..	131
153.	Lack of Care	..	..	..	..	..	..

XII. OLD AGE.

154	Senility	1	9	6	11	4	2	101
	.....	21	24	13	..	..	..	..

XVII AFFECTIONS PRODUCED BY EXTERNAL CAUSES

[illegible]

RATIO OF MALE TO FEMALE BIRTHS AND OF BIRTHS TO DEATHS.

Year	Births of Males to 1,000 Births of Females	Ratio of Births to Deaths	Year	Births of Males to 1,000 Births of Females	Ratio of Births to Deaths
1901	1,081	3.55	1909	1,086	2.59
1902	1,010	2.59	1910	1,065	2.69
1903	1,056	2.95	1911	1,103	2.43
1904	1,118	3.04	1912	1,084	2.43
1905	1,059	3.11	1913	1,053	2.67
1906	1,094	2.07	1914	1,081	3.30
1907	1,075	2.96	1915	1,100	3.47
1908	1,077	2.73			

DEATHS OF INFANTS UNDER ONE YEAR, DURING 1915.

To 100 Births	8.79
To 100 Deaths from all causes	33.80
Stillbirths	305

Respectfully submitted,

T. J. NORMAN, M.D.
Deputy Registrar General.

APPENDICES

APPENDIX A.

ALBERTA HORSE BREEDERS' ASSOCIATION.

SEVENTEENTH ANNUAL REPORT.

HON. DUNCAN MARSHALL,

Minister of Agriculture.

SIR,—I beg to submit the Seventeenth Annual Report of the Alberta Horse Breeders' Association, being for the year 1915-1916.

The annual meeting of the Alberta Horse Breeders' Association was held at the Palliser Hotel, at 8 o'clock, Wednesday, April 12th, 1916.

MINUTES of the Annual Meeting of the Alberta Horse Breeders' Association held in the Palliser Hotel at 8 p.m., Wednesday, April 12th, 1916.

The President, Mr. Geo. Lane, in the chair.

The minutes of the last meeting were adopted as read.

The president then addressed the meeting, reviewing the conditions of the horse industry at the present time, and expressing his conviction that those interested in horse breeding could look with confidence to the future.

The secretary then presented the annual report and financial statement.

It was moved by Mr. McKillop, seconded by Mr. Clark:

THAT the reports be adopted as read. Carried.

Considerable discussion then took place in connection with the Brand Act, and it was finally moved by Mr. Ruttle, and seconded by Mr. Thorburn,

THAT the Alberta Horse Breeders' Association in annual meeting assembled, strongly urge that the Brand Act be so amended as to provide for absolute ownership by one person or firm of at least one brand for horses and one for cattle, and the elimination of any possibility of the automatic cancellation of such brands. Carried.

It was moved by Mr. Bredt, seconded by Mr. Thorburn.

THAT a hearty vote of thanks be tendered to Commissioner Perry of the Royal Northwest Mounted Police, and to Supt. Major Fitz-Horrigan, Superintendent at Calgary, for the splendid work done during the past year by the Mounted Police in the interests of the stockmen of Alberta. Carried.

It was moved by Mr. Thorburn, and seconded by Mr. Ruttle.

THAT a hearty vote of thanks be tendered to the president for the able manner in which he has occupied the office of president during the past year.
Carried unanimously.

The following officers and directors were then elected:

President, Geo. Lane, Calgary.

1st. Vice-President, Dr. J. G. Rutherford, Calgary.

2nd. Vice-President, Geo. Hoadley, M.P.P., Okotoks.

Secretary-Treasurer, E. L. Richardson, Calgary.

Ex-Officio Directors: Hon. Duncan Marshall, Minister of Agriculture, John Bright, Live Stock Commissioner, Ottawa.

BREED DIRECTORS.

Clydesdales	D. Thorburn	Davisburg
Percherons	C. R. de la Vergne	Glenbow
Shires	Tom Rawlinson	Innisfail
Belgians	W. W. Hunter	Olds
Suffolk Punch	H. J. Hartell	Cheadle
Standard Breds	I. G. Ruttle	Calgary
Thoroughbreds	A. K. Morrison	Calgary
Hackney	John Weir	Carbon
Coach Breeds	G. E. Goddard	Cochrane
Heavy Draught	E. D. Adams	Calgary
Agricultural	Thos. McMillan	Okotoks
Cartage Horses	Fred Johnston	Calgary
Delivery Horses	N. J. Christie	Calgary
Roadsters	Arch. McKillop	Calgary
Carriage Horses	D. P. McDonald	Cochrane
Saddle Horses	F. C. Lowes	Calgary
Ponies	O. E. Brown	Calgary
Shetland and Welsh Ponies..	P. M. Bredt	Calgary

The following nominations were made for general directors :

F. R. Drake, A. McIntosh, J. B. Muckle, D. Clark, R. F. Bevan, A. L. Dollar,
H. Banister, W. B. Thorne, Wm. Moode, F. Schroeder.

Moved by Mr. de la Vergne, seconded by Mr. Ruttle,

THAT nominations close. The motion was carried and the above directors
declared elected.

Moved by Mr. McKillop, seconded by Mr. Ruttle,

THAT the following officials be appointed:

Hon. Pres., A. L. Sifton, Premier of Alberta.

PATRONS.

His Honour the Lieut.-Governor of Alberta.

His Worship the Mayor of Edmonton.

His Worship the Mayor of Lethbridge.

His Worship the Mayor of Medicine Hat.

His Worship the Mayor of Wetaskiwin.

His Worship the Mayor of Calgary.

HONORARY DIRECTORS.

W. F. Stevens, Live Stock Commissioner, Edmonton.

H. S. Arkell, Assistant Live Stock Commissioner, Ottawa.

Geo. Roels, Calgary.

A. O. Critchely, Cochrane.

A. C. Shakerley, Pekisko.

Dr. J. C. Hargrave, Medicine Hat.

C. W. Peterson, Calgary.

Dr. S. F. Tolmie, Victoria, Dominion Live Stock Representative.

Dr. Creamer, Qu'Appelle, Sask., Dominion Live Stock Representative.

W. T. McDonald, Victoria, B. C., Live Stock Commissioner.

P. F. Bredt, Live Stock Commissioner, Regina, Sask.

It was moved by Mr. Peterson, seconded by Mr. Ruttle,

THAT Jas. B. Sutherland, C.A., be appointed official auditor of the
Alberta Horse Breeders' Association. Carried.

Dr. J. G. Rutherford then addressed the meeting, urging upon the mem-
bers the advisability of taking advantage of every opportunity to improve
their herds no matter what breed of horses they were engaged in raising.

Miss E. Cora Hind of the Manitoba Free Press, addressed the meeting
giving information regarding the movement of horses through the Winnipeg
Stock Yards, with special reference to horses which were purchased in
Eastern Canada for the war which were found to be unsuitable and rejected,
and which were being sent back to Western Canada in large numbers.

Moved by Mr. Forster, seconded by Dr. Rutherford,

THAT the Alberta Horse Breeders' Association in annual meeting assem-
bled, desires to impress upon the Minister of Agriculture for Alberta, the
desirability of passing stallion legislation at the earliest possible moment
similar to that in force in the Province of Manitoba, with such changes as
may be necessary to meet conditions in Alberta. Carried.

The meeting then adjourned.

GENTLEMEN,—I have pleasure in handing you herewith the annual report of the Alberta Horse Breeders' Association for the year 1915.

The condition of trench warfare in the present war is no doubt having a very marked effect upon the number of horses required for the army. In the first of the year there was considerable interest in the remount question, and your directors did everything it was possible from time to time to bring the Province of Alberta to the attention of the Governments of the Allies desiring remounts, and also rendered the Remount Purchasing Commission any assistance in their power. Your executive also took up with the Hon. Duncan Marshall the necessity of having a Brand Reader accompany the remount purchasing commissions so as to avoid as far as possible stolen horses being sold. It seems difficult to obtain definite information as to the number of horses purchased by the different Governments. I am advised by Mr. McRae, Chief of the Horse Division of the Dominion Live Stock Branch, that up to the 31st of December, 1915, the British Government had purchased between 13,000 and 14,000 horses in Canada, the Canadian Government 25,846 and the French Government 3,500, making a total of approximately 42,346. Of this number the French purchased about 900 in Alberta, and the Canadian Government 2,921, while the British purchased 222. An extract from a letter written by Col. McRae, Director of Supply and Transport, Overseas Canadian Forces, written from Sandgate, Kent, in November, 1915, will be of more than ordinary interest in this connection:

"I am sure if one of the Western horsemen were to visit Shorncliffe camp he would be more than pleased with the record which is being made by the western horse here, and I am hopeful when the war is over that the reputation of Western Canada as a horse country will do much to stimulate interest in horse breeding in Canada, and will result in getting in considerable British capital for that purpose.

"I had the pleasure of making a report for our Government on the Remount Situation in Europe. This involved a careful inspection of the remount stations in England as well as a trip to the front, during which time I had an opportunity to see not only the horses from Canada and the United States as well as from the British Isles, and also from the Argentine, Australia, India and several other countries. The horses at the front are in excellent condition and exceptionally well taken care of. However, I can say that I saw horses from no country equal to the horses that came out of Western Canada. I am riding two western horses myself and I regard them as good as any horses I ever had in my show stables at Vancouver."

There was a very marked difference between the horse show of 1915 and the show held in 1914. There were 1420 entries for the 1914 show and we had only 266 last year. The gate receipts fell off from \$9,474 in 1914 to \$374.20 in 1915, and the comparison of the amount paid in prizes the two years was \$7,054 in 1914, and \$2,639.20 in 1915. The reason for this very great change was because we did not endeavor to hold any evening show on account of the stables being used as military barracks, and even the front of the horse show building was being used as military offices. The show was therefore confined to one for stallions and breeding classes. Arrangements have, however, been made for the erection of some temporary stables, and through the kindness of Lieut.-Col. Lowry and Lieut.-Col. Nasmyth, we have been able to arrange to have the front of the horse show building open through the military offices to admit visitors to the evening show. In addition to adding sufficient classes to put on an evening show, arrangements have been completed by the kind permission of Brig-General Cruikshank, Lieut.-Col. Lowry and Lieut.-Col. Nasmyth for the 82nd and 89th Battalions for Overseas to take part each evening, and while we do not expect such a successful show as was held in 1914, we believe that the members will be pleased with the show under the circumstances.

We are endeavoring at this show to inaugurate a new system for the payment of prizes based upon the number of entries in each class, with the innovation of the payment of a stated amount for prizes, and if this amount is not won the balance will be paid to the winners pro rata according to the number of prize winners. Those of you who may have time to read the correspondence we have had on this subject will undoubtedly be surprised at the interest it has created, not only in all Western Canada, but throughout

the United States. Since the publication of our prize list several improvements have been made to the system, and after we have the experience of using this system at the spring show and the summer exhibition, your directors will be able to make any necessary improvements for the next prize list, or to revert to the old system if they consider it best to do so. In addition to offering prizes as per tabulated list in the prize list, a percentage increase can be offered in the three, four and five year old classes, as well as in the team classes. There can be one tabulated list of prizes for the pure-bred classes, and another tabulated list with somewhat smaller prizes for the other classes, and the balance of the money offered and not won, will be paid to the prize winners according to the number of prizes they have won. While we have had three letters from persons who do not believe that the new change is an improvement, we have had twenty or thirty letters from others with experience who believe that the system is a long step in advance of the old system. I may mention two or three short extracts from letters we have received:

Mr. John Bright, Dominion Live Stock Commissioner, says:—"The system appeals to me as a progressive step and one that is bound to revolutionize the paying of prize money."

Mr. J. C. Simpson, Manager of the Minnesota State Fair, says:—"The more I study your plan the better I like it."

Mr. McHvaine, Chairman of the Programme Committee of the American Association of Fairs and Expositions, states that the president of the association is very much interested in this matter, and has asked your secretary to present the subject in an address before the Association at their next Convention in Chicago. The system has already been adopted by the Spokane Interstate Fair, and is being seriously considered by a number of other State Fairs. It has been discussed at the annual convention of the Agricultural Fairs Association at Edmonton, the North Pacific Fairs Association annual meeting at Seattle, and all comments have been most favorable. Of course, like taxation, there is no possible system that will be absolutely perfect in every instance. The only person who wrote from Eastern Canada was afraid we would localize our show, and in one of the letters from a Western exhibitor the writer was afraid it would result in outside exhibitors coming in and getting all the money. Whatever may be said for or against the system, the exhibitors can be sure of this, that our only aim is to originate a prize list which will distribute prize money on a basis that will give greater encouragement to the exhibitors, particularly at the larger fairs, and with our present prize list as a start, we can surely work out a prize list which will give the maximum of encouragement with the smallest amount of injustice. A few of the difficulties of the old system which we are endeavoring to overcome are as follows:

That all breeds should be put on the same basis according to the number of entries they make;

That the prizes will increase in number as well as in value as the entries increase;

That the largest and therefore most instructive and interesting classes at a show will get the greatest encouragement;

That an exhibition whose revenue fluctuates very greatly as a result of weather and attendance, may state definitely how much they will actually pay in prizes;

That the educational features of an exhibition may be very greatly increased by the judges having to place 80 or 90 per cent. of the entries in a class instead of only ten or twenty per cent., as in the old system;

That new breeders who possibly feel that they cannot hope to win against more experienced exhibitors, will get sufficient encouragement to make an exhibit and gradually make the competition keener as well as very considerably enhance the value of the winnings of the more experienced exhibitors.

The many expressions of appreciation and the wide-spread interest taken in this subject, are good evidence that the inefficiencies of the old system were very generally realized. The idea of a class of three or four entries being able to get as many prizes as a class with twenty, thirty or forty entries, is certainly most unfair, and those who are interested in exhibitions either as exhibitors, directors or managers, have surely sufficient initiative

to endeavor to inaugurate a better system. We ask for your co-operation, and will be glad to have suggestions for improvements after the proposed new system has been tried out this year.

Since the publication of the spring show prize list, and in order to give the spring show the benefit of some improvements which were afterwards made to this system for the payment of prizes, a circular was sent out providing that the minimum prizes in the pure-bred classes, 3 years old and over, except ponies, and for the progeny classes, would be as for five or six entries, and that in the heavy draft and agricultural teams, and the team classes for roadsters and carriage horses, 50% would be added to the list. As these conditions naturally have added considerable to the amount which is to be paid, the entries already made will win more than the amount guaranteed. I mention this so that exhibitors will know the reason that the added money clause cannot be brought into effect for this show.

We again take pleasure in expressing our appreciation to the Provincial Department of Agriculture for financial assistance towards the work of the Association, and we also thank the Live Stock Commissioner's Branch of the Dominion Department of Agriculture for the Dominion Grant towards our show which started at a most opportune time. We had our prize list for 1915 ready for the printer in which \$1,200 was offered for prizes. After receiving advice of the assistance to be given by the Dominion Government, the amount offered was raised to over \$5,000. It was impossible to estimate what entries we could obtain. It happened that \$2,639.00 was actually won. If we had been working on the new basis of payment of prizes we would undoubtedly have stated that we would pay not less than \$3,500, and the prize winners would have been paid \$800 or \$900 more than they actually won.

The Annual report of the R.N.W.M. Police, "E" Division, for the year ended 31st of September, 1915, shows that 68 cases of horse and cattle stealing were committed for trial; of these 34 resulted in conviction in the Supreme and District courts. Since then 17 more cases have been tried and convicted, making a total of 51 convictions, while there are still several awaiting trial. The majority of the thieves convicted are now serving penitentiary or jail sentences, and in addition, over 35 well-known horse and cattle rustlers have been forced to flee the country, and are now fugitives from justice.

As a result of the convictions secured in the above mentioned cases, 118 head of horses were returned to their owners, directly, but in addition to this number, 139 horses have also been restored making a total of 257 head returned to the owners. All these horses had been stolen and turned loose by the thieves when they found that the Police were closing in on them, while others were being held in coulees along the Red Deer and other points waiting for a chance to market them. Some of these horses had been away from home from three to five years. To show the wholesale extent to which horse stealing has been carried on, it may be said that 42 head were returned to the owners in connection with the McKinnon case alone. The estimated value of horses returned is over \$41,000.00.

We take this opportunity of expressing appreciation of the splendid service which is being rendered the stock interests of Alberta in this way by Major Fitz-Horrigan, the superintendent at Calgary, and the officers and members of the force in this division.

Your Brand Committee have endeavored on two occasions to have a meeting with the Minister of Agriculture for Alberta, but on both occasions on account of two or three of the committee being out of the Province, the meetings were postponed. The Committee have asked the Hon. Mr. Marshall to arrange if possible a meeting of your Brand Committee with similar committees from other organizations interested, and the Agricultural Committee of the Alberta Legislature, together with the Brand Commission, so that the whole subject could be thoroughly discussed.

As a result of grade stallions being forced by legislation out of the United States south of Western Canada, particularly south of Manitoba and Saskatchewan, and the fact that Manitoba and Saskatchewan have been forced to pass special stallion legislation, it is quite probable that a considerable number of these grade stallions may now seek new territory in the Province

of Alberta to the detriment of our horse industry. Your president called the attention of the Alberta Department of Agriculture to this condition so that they might be prepared to pass legislation dealing with this matter when it became necessary.

I give below the financial statement for the last calendar year which has been duly audited by your auditor, Mr. Jas. B. Sutherland, C.A.

FINANCIAL STATEMENT, 1915.

INCOME.

Membership Fees	\$ 104.00
Dominion Government Grant	2,932.25
Alberta Government Grant	1,500.00
Clydesdale Association Grant	200.00
Thoroughbred Horse Society Grant (1914)	50.00
Cash Donations	160.00
Proceeds of Sale	1,804.00
Entry Fees, Show and Sale	533.00
Advertising Receipts	435.20
Gate Receipts	374.20
Commission on Sale	89.56
Sundries	121.30
Balance from 1914	694.72
	<hr/>
	\$8,998.23

EXPENDITURE.

Prizes	\$2,639.20
Office Expense—	
Secretary, Office Help, Rent, Postage, Travelling Expenses, Auditor, Telegraphs and Phones, etc.	1,441.26
Printing and Advertising	524.32
Grounds Expense—	
Wages, Straw, Teaming, Plumbing, Hardware, Electric Work, Ribbons, Band, Judges' Expenses, etc.	714.23
Sales Account	1,804.00
Auctioneer	75.00
Members' Dinner and Rent of Hall	110.00
Sundries	25.29
Balance on Hand	1,664.93
	<hr/>
	\$8,998.23

(Signed) GEO. LANE,
President

(Signed) E. L. RICHARDSON,
Secretary and Managing Director

Calgary, 5th March, 1916, audited and found correct.

(Signed) JAMES B. SUTHERLAND,
Chartered Accountant, Auditor.

Respectfully submitted,

E. L. RICHARDSON,
Secretary.

APPENDIX B.

ALBERTA CATTLE BREEDERS' ASSOCIATION.

SIXTEENTH ANNUAL REPORT

HON. DUNCAN MARSHALL,

Minister of Agriculture.

SIR. I beg to submit the Sixteenth Annual Report of the Alberta Cattle Breeders' Association, being for the year 1915-1916.

The annual meeting of the Alberta Cattle Breeders' Association was held at the Palliser Hotel, at 8 o'clock, Monday, April 10th, 1916.

MINUTES of the Annual Meeting of the Alberta Cattle Breeders' Association held in the Palliser Hotel, Calgary, Monday, April 10th, 1916.

President, J. L. Walters, in the chair.

In opening the meeting President Walters referred to the splendid condition of the cattle industry and the bright prospects for the future; the splendid sale the Association held last year and the prospects for the present sale was good evidence of the condition of the purebred cattle business. He then called upon the secretary to read the annual report and financial statement.

After the reading of the annual report and financial statement, it was moved by Mr. Knights, seconded by Mr. Mace,

THAT the annual report and financial statement be adopted as read. Carried unanimously.

Mr. W. F. Stevens, Live Stock Commissioner for Alberta explained to the meeting the provisions of the new Brand Act.

The secretary explained that an invitation had been extended to the Brand Committees of the Horse and Cattle Breeders' Associations, to meet the Agricultural Committee of the Alberta Legislature on Wednesday, April 5th, but owing to the members of the Cattle Breeders' committee being busy in connection with the shipment of their bulls to the sale, it was impossible for them to be present. Three of the members of the Horse Breeders' Committee and the secretary were present when the question was discussed. The matter will no doubt be finally dealt with by the present session of the Legislature.

Dr. J. G. Rutherford, Director, Alberta Cattle Breeders' Association and Vice-President of the Western Stock Growers' Association, called attention to the absolute necessity of the stockmen taking advantage of every opportunity for co-operation and urged those present to join the Western Stock Growers' Association, and as many as possible to attend the annual meeting of that Association to be held in Macleod on the 11th of May.

It was moved by Mr. C. W. Peterson, seconded by Mr. Stevens,

THAT a hearty vote of thanks be tendered to Commissioner of the Royal Northwest Mounted Police at Regina and the Superintendent at Calgary for the splendid work being done by this force in the interests of the stockmen of Alberta. Carried.

The following were then nominated for directors for the ensuing year:

Geo. Lane, Wm. Sharp, S. M. Mace, Jas. Sharp, Frank Collicut, Thos. Laycock, P. F. Huntley, J. G. Rutherford, W. H. Knights, Lew Hutchinson, J. L. Walters, P. M. Bredt, Jos Capron, R. Ness, T. B. Ralphs, J. Todd, J. H. McArthur, S. G. Cowan, A. W. Latimer.

It was moved by Mr. Stevens, seconded by Mr. Hutchinson,

THAT nominations close. Carried.

Messrs. Murray, Shipley, Higginbotham and Gibson were asked by the President to act as scrutineers.

The scrutineers reported that the following fifteen directors received the highest number of votes, and the president declared these elected.

J. L. Walters, Lew Hutchinson, Dr. J. G. Rutherford, F. Collicut, Wm. Sharp, S. M. Mace, P. F. Huntley, Thos. Laycock, R. Ness, P. M. Bredt, Geo. Lane, A. W. Latimer, Jas. Sharp, R. Knights, S. G. Cowan.

Mr. W. F. Stevens, H. S. Arkell and C. W. Peterson were appointed Honorary Directors.

It was moved by Mr. Hutchinson, seconded by Mr. Knights,

THAT Mr. Jas. B. Sutherland, C.A., be the official auditor of the Association. Carried.

Moved by Mr. Day, seconded by Mr. Mace,

THAT the meeting adjourn.

At a meeting of the Directors held immediately after the annual meeting the following officers were elected:

President, J. L. Walters, Clive.

1st. Vice-President, Wm. Sharp, Lacombe.

2nd. Vice-President, Thos. Laycock, Calgary.

Secretary-Treasurer, E. L. Richardson, Calgary.

GENTLEMEN,—I have the honour to submit herewith the Sixteenth Annual Report of the Alberta Cattle Breeders' Association, for the year 1915.

The auction sale of 336 bulls on April 22nd and 23rd at Calgary, at an average of \$158.79, and the sale of 73 bulls at Lacombe on June 2nd at an average of \$155.95, are sales to which the Association can refer with considerable pride. The sale of 409 bulls for a total of \$64,740 during the year brings the total number of bulls sold by the Association up to 2968, and a total value of \$338,227.00. A number of bulls were sold for over \$500; the highest priced animal being \$625.00, and sold by Mr. Fred Cowman of Cremona, to Mr. Frank Collicut of Crossfield.

In order to offer special inducements for B. C. buyers to purchase at our sales, the Dominion Veterinary Director General through Dr. Hargrave, Chief Inspector for Alberta, kindly arranged to test bulls for tuberculosis in lots of ten or more. About 90 were tested. Twenty-one bulls were sold to go to B. C., but strange to say, with the exception of one bull purchased by a B. C. representative, and five bulls purchased by your secretary to fill B. C. orders, all the B. C. buyers bought bulls which had not been previously tested. Unfortunately, one of the bulls reacted, and a compromise was finally arranged between the purchaser and the seller. This is the only bull sold through the Association to a B. C. buyer which has reacted. On account of our sales gradually getting larger, and the importance of looking after new markets, arrangements were again completed to have animals tested when desired in lots over ten, and a regulation was included in the rules for the next sale providing that entries of bulls would only be accepted for the sale on the understanding that should they be purchased to go to a point to which they could not be shipped according to Government regulations without passing the test for tuberculosis, the seller would guarantee that the animal would pass the test or take the bull back, and authorize the secretary to refund the purchase price. It is possible that some time in the near future, all bulls will be required to pass the tuberculin test before being admitted to the sale, but it was felt that we should take the step referred to first in order to see what the result would be. All the members of the B. C. Stock Breeders' Association have been communicated with and given an explanation of the conditions of the sale, and a catalogue sent to each.

The cattle were judged the day before the sale, the awards being placed by Mr. Mark Gardhouse at Calgary, and at Lacombe by Mr. Jas. Clements, Assistant Superintendent of Fairs and Institutes, Department of Agriculture, Edmonton.

The following statement gives a comparison of the number of bulls sold, average prices obtained for the several breeds at the Calgary and the Lacombe sales for the last five years:

	Year	Shorthorns		Herefords		Galloways	
		No.	Average	No.	Average	No.	Average
Calgary	1911	50	193.24	22	87.04	1	95.00
Lacombe	1911	42	105.14	9	78.33		
Calgary	1912	58	122.95	24	112.08	1	115.00
Lacombe	1912	25	143.44	6	140.83		
Calgary	1913	49	199.38	12	232.91	2	115.00
Lacombe	1913	47	175.42	15	143.33	1	100.00
Calgary	1914	104	168.70	78	222.33	1	285.00
Lacombe	1914	38	158.71	4	197.50		
Calgary	1915	213	146.38	86	196.04		
Lacombe	1915	46	172.60	9	136.66		

	Year	Ayrshires		Aberdeen Angus		Holsteins	
		No.	Average	No.	Average	No.	Average
Calgary	1911	4	52.50	9	108.88		
Lacombe	1911	1	75.00	3	108.33		
Calgary	1912			9	78.80	5	65.00
Lacombe	1912			4	152.50	2	140.00
Calgary	1913			4	195.00		
Lacombe	1913	3	58.33	13	130.38		
Calgary	1914	2	60.00	14	156.79	4	78.75
Lacombe	1914	2	62.50	6	169.00	1	80.00
Calgary	1915	1	60.00	30	154.50	6	78.33
Lacombe	1915	2	57.50	14	122.14	2	70.00

	Year	Total No.	Ave. Price	Total Receipts
Calgary	1911	86	98.39	\$ 8,362.00
Lacombe	1911	55	99.50	5,521.00
Calgary	1912	97	113.11	10,972.00
Lacombe	1912	37	140.00	5,181.00
Calgary	1913	67	202.61	13,575.00
Lacombe	1913	79	156.52	12,365.00
Calgary	1914	203	186.65	37,890.00
Lacombe	1914	51	157.47	8,031.00
Calgary	1915	336	158.79	53,355.00
Lacombe	1915	73	155.95	11,385.00

Highest Prices Realized.

	Year	Amount	Breed	Seller	Purchaser
Calgary	1911	185.00	Shorthorn.	W. Sharp, Lacombe,	Hy. Koster, Alkali Lake
Lacombe	1911	165.00	Shorthorn.	W. Sharp, Lacombe,	J. McFarlane, Clive
Calgary	1912	360.00	Shorthorn.	D. Sinclair, Innisfail,	Thos. Moore, Lyndon
Lacombe	1912	235.00	Shorthorn.	P. A. Switzer, Lacombe,	J. Harbeson, Botha
Calgary	1913	350.00	Hereford.	A. Fletcher, Mound,	Calgary Col. Co.
Lacombe	1913	285.00	Hereford.	E. A. Kriese, Lacombe,	T. Baird, Red Willow
Calgary	1914	565.00	Hereford.	A. Fletcher, Mound,	Alberta Estates Ltd.
Lacombe	1914	250.00	Shorthorn.	P. M. Brett, Calgary,	J. Timothy, Edmonton
Calgary	1915	625.00	Hereford.	Fred Cowman, Cremona,	F. Collicut, Calgary
Lacombe	1915	265.00	Shorthorn.	G. W. Culp, Spring Coulee,	Indian Agent, Onion Lake.

One of the lessons which has been in evidence each year of our sale is the fact that we cannot satisfactorily sell dairy bulls at a sale where practically all the entries are bulls of the beef breeds. When there are only ten or fifteen dairy bulls for sale in a total of 360 bulls entered, there is not sufficient inducement for prospective purchasers to travel a distance to attend the sale, and the inevitable result is the sacrifice of the bulls. On the other hand, breeders would not have sufficient confidence in a sale of dairy bulls to risk the entry of many expensive bulls. It is believed, however, that it would be possible to make a success of a sale, of purebred dairy bulls and females as well as grade dairy females if held at a different time, and the sale was sufficiently large to induce buyers to come from a distance. It has therefore been decided to hold a sale annually at Calgary about the middle of October. The conditions to be about the same as at the spring bull sales. In view of this sale, the undersigned discouraged the entry of dairy bulls for the forthcoming spring sale, and as a result no dairy bulls were catalogued.

Owing to enquiries received from time to time for females of the beef breeds, and the fact that a number of our breeders have now got their herds up to such a size that they wish to dispose of females, it has been decided to

hold an annual sale of purebred and grade beef females at the time of the Fat Stock Show at Calgary, at which time any stock entered at the Fat Stock Show could also be sold. Whether any bulls should be permitted to be sold at that time remains to be decided. It is possible that it might be advisable to permit the entry of a few bulls, possibly not exceeding five bulls from any one breeder, as some of the stockmen wish to purchase bulls at this time of the year, and it is our duty to endeavor to cater to any demand for breeding stock.

The report of the Fat Stock Show will be presented to the Fat Stock Show Committee and printed along with the other Alberta Live Stock Associations reports. In order to assist in financing the Fat Stock Show, the Alberta Cattle Breeders' Association gave a grant of \$400 towards the event.

Your president and secretary represented the Association at the annual meeting of the Western Canada Live Stock Union at Victoria in October last. A copy of the annual report of the Union has been mailed to each one of our members. The Union have had one of its members attend the recent annual meeting of the American National Live Stock Association held at El Paso, Texas, who will give a report of this meeting at the next annual meeting of the Western Canada Live Stock Union to be held at Calgary the first week in November. It is hoped that a number of our members will be able to be present at this annual meeting to get in closer touch with the work the Union is endeavoring to do, and be able to give this organization their hearty co-operation.

Your president and secretary also attended the Breed Society meetings in Toronto in February, and acting on behalf of the Western Canada Live Stock Union, arranged for a conference in Winnipeg on their return from Toronto with representatives of the Western Canada Shippers' Association and the Winnipeg Live Stock Exchange, with a view to taking joint action in presenting representations to the Railway Commission with a view to preventing a discontinuance of free return transportation for attendants delivering live stock, and also with a view to having the fee of 75 cents a car for cleaning and disinfecting stock cars discontinued. These organizations were successful in having the Railway Commission suspend the coming into force of the regulation cancelling free transportation for attendants pending a hearing of the live stock organizations in Western Canada. We have also asked for a hearing from the Railway Commission in connection with the 75 cents charge for cleaning and disinfecting cars, and in connection with the stockmen being allowed second class transportation for the return trip, where, owing to the great distances in Western Canada, and the fact that owners very frequently accompany their own stock, they wish to travel first class.

Your Brand Committee have endeavored on two occasions to have a meeting with the Minister of Agriculture for Alberta, but on both occasions on account of two or three of the committee being out of the Province, the meetings were postponed. The Committee have asked the Hon. Mr. Marshall to arrange if possible, a meeting of your Brand Committee together with similar committees from other organizations interested, and the Agricultural Committee of the Alberta Legislature, together with the Brand Commission so that the whole subject could be thoroughly discussed.

We are again indebted to the Alberta Department of Agriculture for the annual grant to the Association, and for the supply of judges and the co-operation of their department. We also very much appreciate the financial assistance, given by the Dominion Government through the Live Stock Commissioner's Branch towards financing the Fat Stock Show. With this additional assistance the prize list of this show can be increased, and added encouragement given to exhibitors.

The annual report of the R.N.W.M. Police, "E" Division, for the year ended 31st of September, 1915, shows that 68 cases of horse and cattle stealing were committed for trial, of these 34 resulted in conviction in the Supreme and District Court. Since then 17 more cases have been tried and convicted, making a total of 51 convictions, while there are still several awaiting trial. The majority of the thieves convicted are now serving penitentiary or jail sentences, and in addition, over 35 well-known horse and cattle rustlers have been forced to flee the country, and are now fugitives from justice.

As a result of the convictions secured in the above mentioned cases, 118 head of horses were returned to their owners, directly; but in addition to this number, 139 horses have also been restored, making a total of 257 head

returned to the owners. All these horses had been stolen and turned loose by the thieves when they found that the Police were closing in on them; while others were being held in coulees along the Red Deer and other points, waiting for a chance to market them. Some of these horses had been away from home from three to five years. To show the wholesale extent to which horse stealing had been carried on, it may be said that 42 head were returned to the owners in connection with the McKinnon case alone. The estimated value of the horses returned is over \$41,000.00.

We take this opportunity of expressing our appreciation of the splendid service which is being rendered the stock interests of Alberta in this way by Major Fitz-Horrigan, the Superintendent at Calgary, and the officers and members of the force of this division.

FINANCIAL STATEMENT, 1915.

INCOME

Alberta Government Grant	\$ 1,500.00	
Canadian Bank of Commerce	50.00	
Entry Fees	858.00	
Transportation Fees and Freight Refunds	1,996.80	
Commissions and Loading Charges	1,528.55	
Received in Settlement of Claims	91.33	
Sundries	198.54	
Membership Fees	159.00	
		\$ 6,382.22

EXPENDITURE.

Prizes	\$ 234.00	
Freight Accounts	1,776.23	
Grounds Expense and Wages	1,231.68	
Office Help, Postage, Rent, Telegraphs and Phones, Travelling Expense, Auditor, Ribbons, etc.	856.00	
Printing and Advertising	652.08	
Secretary's Salary	500.00	
Grant to Fat Stock Show	400.00	
Auctioneer	325.00	
Members' Dinner, Palliser Hotel	121.80	
Paid in Settlement of Claim	91.33	
Sundries	170.99	
		\$ 6,359.11

BALANCE SHEET.

Income, 1915	\$ 6,382.22	
Expense, 1915	6,359.11	
Surplus for Year	23.11	
Additional Balance at December 31st, 1914	529.56	
Total Surplus December 31st, 1915		\$ 532.67
DR.—	SALES ACCOUNT, 1915.	
Proceeds of Sale, Calgary	\$53,355.00	
Proceeds of Sale, Lacombe	11,385.00	
		\$64,740.00
CR.—		
Paid to Contributors, Calgary Sale	\$52,049.45	
Commissions and Charges Deducted	1,305.55	
		\$53,355.00
Paid to Contributors, Lacombe Sale	\$11,162.00	
Commissions and Charges Deducted	223.00	
		\$11,385.00
		\$64,740.00

(Signed) J. L. WALTERS,
President.

(Signed) E. L. RICHARDSON,
Secretary and Managing Director.

Calgary, 8th March, 1916; audited and found correct.
(Signed) JAMES B. SUTHERLAND,
Chartered Accountant, Auditor

Respectfully submitted,

E. L. RICHARDSON, *Secretary.*

APPENDIX C.

ALBERTA SHEEP BREEDERS' ASSOCIATION

TWELFTH ANNUAL REPORT.

HON. DUNCAN MARSHALL.

Minister of Agriculture.

SIR,—I have the honour of presenting herewith the proceedings of the Annual meeting of the Alberta Sheep Breeders' Association held in the offices, Calgary, Wednesday, December 15th, 1915, together with the Twelfth Annual Report of the Association which was presented at that meeting.

MINUTES of Annual Meeting of the Alberta Sheep Breeders' Association held in the offices at Calgary, at 3 p.m., Wednesday, December 15th, 1915. There were thirty-four members present.

President, R. Knights in the chair.

The minutes of the last annual meeting were adopted as read.

The secretary read the annual report for the past year, and presented the financial statements for the calendar year 1914, and for the year ending September 30th, 1915.

Moved by Mr. Peterson, seconded by Mr. Stevens,

THAT the annual report and financial statements be adopted as presented. Carried.

It was moved by Mr. Wade, seconded by Mr. Brett,

THAT the secretary be instructed to submit for the consideration of the Dominion Economic and Development Commission the unjust charge of one-half of one per cent. made by the packers and buyers of Alberta against the producers to cover loss sustained by animals condemned by the Dominion Meat Inspectors, and especially to ascertain the value of the meat condemned by the said inspectors as against the amount actually deducted from the producers at the same points for this purpose. Carried.

The secretary explained that the following telegram had been forwarded to the secretary of the Economic and Development Commission at Ottawa:

"Owing to increased price of wool, sheep industry greatly encouraged. President Alberta Sheep Breeders' Association recommends enquiry as to advisability having duty taken off coyote proof wire fencing. Cheaper fencing would be another great encouragement to the sheep industry. Also suggest advisability having mutton offered in butcher stores so labelled that purchasers can distinguish between imported frozen and fresh home grown mutton."

Moved by Mr. Peterson, seconded by Mr. Hill,

THAT an annual auction sale of purebred rams and purebred and grade ewes be held by the Association at Calgary. That the first week in October be suggested for the first sale, but that the Executive Committee have power to finally set the date, and to work out the details of the sale. That entries be permitted from breeders in the four Western Provinces, provided that all animals have been owned by the contributor and in the province in which he lives from January 1st of the year of the sale. That the animals entered for the sale be judged from the breeder's standpoint, and ribbons awarded in the various classes. Carried.

Moved by Mr. Stevens, seconded by Mr. Downie,

THAT a hearty vote of thanks be tendered to Mr. John Bright, Dominion Live Stock Commissioner, for the assistance given to the sheep industry of Alberta through the Alberta Sheep Breeders' Association as a result of his Branch supplying expert wool graders to grade the wool handled by the Association, and that the Live Stock Commissioner be respectfully asked to continue this service. Carried.

It was moved by Mr. Peterson, seconded by Mr. Stevens,

THAT all judging in the pure-bred classes at the Fat Stock Show except in wether classes, should be from the breeder's standpoint, and in all other classes from the consumer's standpoint;

That the carload class be restricted to wethers, any age, and the offer of Messrs. Wade & Jack to donate \$50.00 to this class be accepted with thanks.

That classes be added if funds permit, for pens of five, for grades and for purebreds. Carried.

Before the election of officers was proceeded with the president called upon Mr. John A. Turner, the judge of the Fat Stock Show, to present on behalf of the Association an address and sterling silver inkstand to the secretary, E. L. Richardson, as an expression of appreciation for his services as secretary.

The election of officers then resulted as follows:

President, C. W. Peterson.
1st Vice-President, R. Knights.
2nd Vice-President, P. M. Bredt.

Directors:

D. Howell, Irricana.
Hugh Hill, Lloydminster.
Herbert Smith, Camrose.
R. C. Harvey, Lethbridge.
Ed. Wade, Calgary.
E. Parlbay, Alix.
Dr. A. M. McKay, Calgary.
Wm. Parslow, Calgary.
W. D. McLennan, Airdrie.
O. Sigurdson, Burnt Lake.

Moved by Mr. Bredt, seconded by Mr. Knights.

THAT nominations close. Carried.

Moved by Mr. Wade, seconded by Mr. Knights.

THAT Mr. Jas. B. Sutherland, C.A., Calgary, be appointed official auditor for the Alberta Sheep Breeders' Association. Carried.

Moved by Mr. Wade, seconded by Mr. Bredt.

THAT a very hearty vote of thanks be tendered the retiring president, Mr. R. Knights, for the able manner in which he has presided over the affairs of the Alberta Sheep Breeders' Association as president for the past year.

Carried.

Moved by Mr. Parslow, seconded by Mr. Hill.

THAT the meeting adjourn.

ANNUAL REPORT OF THE ALBERTA SHEEP BREEDERS' ASSOCIATION FOR THE YEAR 1914-1915.

GENTLEMEN.—I present herewith the annual report of the Alberta Sheep Breeders' Association for the year ending October 31st, 1915.

It is always a pleasure to write a report for an Association having for its object the development of an industry which shows many evidences of sound growth. This is the case with the Alberta Sheep Breeders' Association at the present time. The general advance in the price of wool for the past two years has already had a most beneficial effect on the sheep industry. The assistance given by the Dominion Government providing experts to grade the wool has made it possible for the Association to inaugurate wool sales which give promise of development into very important factors in the sheep business. The financial assistance given to the Alberta Sheep Breeders' Association each year by the Alberta Department of Agriculture had the result of providing an influential organization to handle the sale of wool as well as the other activities of the Association.

In connection with the sheep industry it is interesting to study the statistics of the various parts of the world as well as the importation of sheep and mutton to Canada. The figures have been kindly supplied by Mr. John Bright, Dominion Live Stock Commissioner. It is hoped that the sheepmen of Alberta will do their part in the next few years to make a much better showing as far as the sheep statistics of Alberta are concerned.

SHEEP IN THE WORLD.

EUROPE:

Spain	15,829,954
France	14,559,586
Great Britain	24,285,514
Ireland	3,600,581
Italy	11,162,926
Russia in Europe	42,735,567
Turkey in Europe	27,094,678
Other European Countries	19,620,222
Germany	5,803,445
Austro-Hungary	12,337,542

NORTH AMERICA 55,014,172

ASIA:

India	31,233,065
Russia in Asia	14,519,629
Other Asiatic Countries	2,955

AFRICA:

Union of South Africa	35,710,843
Other African Countries	9,067,927

SOUTH AMERICA:

Argentina	83,546,000
Uruguay	26,286,296
Other South American Countries	4,567,194

OCEANIA:

Australia	85,057,402
New Zealand	24,798,763

SHEEP IN CANADA.

Prince Edward Island	86,640
Nova Scotia	205,542
New Brunswick	111,026
Quebec	554,491
Ontario	611,789
Manitoba	50,880
Saskatchewan	133,311
Alberta	238,579
British Columbia	46,404
	<hr/>
	2,038,662

SHEEP IMPORTED INTO CANADA.

Fiscal Year 1914-15	110,663
Six Months ending September 30, 1915	14,576

Mutton and Lamb, Fresh, Chilled or Frozen, Imported.

	Pounds	Value
Fiscal Year 1914-1915	3,446,876	\$369,967
Six Months ending September 30, 1915	1,216,631	147,308

In the face of the above facts there is surely an opportunity for stock breeders of Canada to be of great national service in increasing the sheep stock of our country and while doing so, reap the benefits accruing from a most profitable business.

During the year the usefulness of the Alberta Sheep Breeders' Association has been considerably increased as a result of the success of its second annual wool sale.

Last year the Association sold 16,927 pounds at 19 cents per pound for the wool and 9 cents for tags. Twenty-one members took advantage of the offer of the Association to handle wool. This year the Association sold 96,258 pounds of wool, practically five carloads, for prices as shown in the following statement under the several grades. The prices averaged 27.77 cents per pound. 83 members sold wool from 14,368 sheep through the Association. A price of 25 cents per pound was obtained for two members sending in wool after the sale.

The sale was very gratifying to the members selling the wool, with one or two exceptions. These were on account of the price for Fine Medium clothing wool being only 22 cents which was much too low in comparison with the

prices of the other grades. In order to as far as possible rectify the inequality in prices, the \$140.31 balance left over on account of shrinkage and fractional weights was paid out at the rate of a cent a pound on this grade. There was also a case of difference in weight in one shipment which has been adjusted by the Association. This year all weights were based on weights of each class as sorted. In future the wool will also be weighed before being sorted which will give us a double check. Of course, it will not be possible to have the weights exactly the same as weighing in small quantities, handling two or three times shrink and fractional weights will make some difference. Every effort will be made, however, to see that the variation is as small as possible.

In addition to the wool sold as per statement above the Association sold 629 pounds for Mr. Lyall and 139 pounds for Mr. H. A. Malcolm for 25 cents a pound. This wool was received after the other wool had been sold.

The Association has continued its efforts in the exchange of stock and issued a list of stock for sale and stock wanted.

The question of holding an auction sale of sheep in the fall should be decided by the meeting. The sheep industry is so rapidly getting on a better basis that every means of helping the sheep rancher as well as the breeder of pure-bred sheep should be taken advantage of. It would appear as if an October sheep sale would be a good method of disposing of sheep of both sexes as well as being a great advantage to persons wanting to purchase. If we can establish a sheep sale along the lines of the annual cattle sale so successfully held by the Alberta Cattle Breeders' Association, the Association will have added one more encouragement towards the development of the sheep industry in Alberta.

THE FAT STOCK SHOW.

The sheep sections of the Fat Stock Show held December 8th to 11th were well patronized and the quality of the stock good. There were 101 entries and 4 carloads shown.

The awards were placed by G. H. Hutton, Superintendent Dominion Experimental Farms, Lacombe. The 1914 prize winners having been attached to the previous year's report, the list of winners at the 1915 show will be attached hereto.

The carcasses entered for competition were sold to Messrs. P. Burns & Co., at the following prices:

	1st	2nd	3rd	Balance
Pure-bred and Grade Shearling, ewe or wether	17c	15c	14c	13c
Pure-bred or Grade Lamb of Calendar Year	18c	16c	15c	14c

In reply to a resolution passed at the last annual meeting asking the Dominion Minister of Agriculture to put in force some system of identification of imported frozen mutton, the Hon. Martin Burrell has replied as follows: "As at present advised I do not think that this is a matter which we could very well interfere with. At least I do not know what legislative authority we should have to deal with such a thing in this Department or any other. I should rather think it is a matter that could be dealt with by a Provincial or Municipal authority."

At the last annual meeting it was suggested that we endeavor to make arrangements for reduced rates for woven wire fencing. An effort was made to obtain the best possible prices for the members on woven wire fencing through Mr. E. J. Fream, Vice-president of the Grain Growers Grain Co., Calgary. It was necessary, however, to be able to order in carload lots, and it was not thought advisable to order in such quantities and hold same in stock pending receipt of orders from various members. Any member requiring this quantity, however, can have same shipped to his nearest station through the above company, a circular quoting prices was mailed to each member.

Your president attended the annual meeting of the Western Canada Live Stock Union at Victoria, October 27th and 28th, as the official representative of the Alberta Sheep Breeders' Association. A copy of the printed report of the proceedings of the meeting will be mailed to each member as soon as it is received from the printer.

The end of the fiscal year of the Association was changed at the last annual meeting from the 31st of December to October 31st. We therefore present herewith the financial statements for 1914 and 1915.

Respectfully submitted,

E. L. RICHARDSON, *Secretary*

FINANCIAL STATEMENT.

ALBERTA SHEEP BREEDERS' ASSOCIATION
1914.

RECEIPTS.

Grant from Alberta Department of Agriculture . . .	\$ 400.00
Membership Fees	44.50
Registration Fees	15.50
Sale of Wool Sacks	26.00
Proceeds of Wool Sale	3,298.90
Sundries	1.70
Cash on Hand December 31st, 1914	21.85
Overdraft December 31st, 1914	112.60
	—
	3,921.05

DISBURSEMENTS.

Wool Sale Checks	3,234.52	
Freight Paid on Wool and Deducted from Proceeds	63.50	3,298.02
Freight (Fat Stock Show)		118.58
Secretary	100.00	
Travelling Expenses	93.45	
Office Expenses	53.88	
Help in Office	37.50	284.83
Printing and Advertising		60.05
Wool Sacks and Twine		58.62
Labor, re Wool Sale		40.95
Prizes		35.00
Membership W. C. L. S. U.		25.00

\$ 3,921.05

6th March, 1915, audited and found correct.

(Signed) JAMES B. SUTHERLAND, C.A.,
Auditor.

FINANCIAL STATEMENT.

ALBERTA SHEEP BREEDERS' ASSOCIATION
1915.

RECEIPTS.

Alberta Government Grant	\$ 400.00
Membership Fees	106.50
Freight Collected	327.11
Registration Fees	11.37
Bags and Twine Sold	330.36
Handling Charges Collected	381.44
Sundries	5.60
Proceeds of Wool Sale	26,837.61
Overdraft	1.92
	—
	28,401.91

EXPENDITURE.

Medals	\$ 30.00
Printing	71.50
Freight Paid	312.49
Office Expenses	139.76
Cost of Bags and Twine	355.35
Expense Wool Sale	436.58
Secretary's Salary	100.00
Wool Sale Cheques	26,843.63
Paid Overdraft 1914	112.60
	—
	28,401.91

Calgary, December 1915; audited and found correct.

(Signed) JAMES B. SUTHERLAND, C.A.,
Auditor.

APPENDIX D.

ALBERTA SWINE BREEDERS' ASSOCIATION.

TWELFTH ANNUAL REPORT

HON. DUNCAN MARSHALL,

Minister of Agriculture.

SIR,—I have the honour of presenting herewith the proceedings of the Annual Meeting of the Alberta Swine Breeders' Association held in the offices, Calgary, Thursday, December 16th, 1915, together with the Twelfth Annual Report of the Association which was presented at that meeting.

MINUTES of Annual Meeting of the Alberta Swine Breeders' Association held in the offices, Calgary, at 11 a.m., Thursday, December 16th, 1915.

The president Mr. Lew Hutchinson in the chair.

The minutes of the last annual meeting were adopted as read.

The secretary presented the annual report and financial statements for the fiscal year of 1914, and for the fiscal year ending September 30th, 1915.

It was moved by Mr. Malcolm, seconded by Mr. Hoover,

THAT the annual report and financial statements be adopted as presented. Carried.

General discussion then took place regarding the Fat Stock Show and the following resolution was moved by Mr. Ness and seconded by Mr. Currie,

THAT the following recommendations be made to the Executive Committee of the Fat Stock Show as suggestions for the next prize list:

That barrows be taken out of the breeding classes, and that purebred classes be added for barrow under six months, and barrow six months and under nine.

Separate classes to be added for Bacon Type and Medium Thick.

That a championship commercial hog class be added for sow or barrow, bacon type, and a similar class for medium thick.

That all hogs in commercial classes be judged from the consumers standpoint, and in pure-bred classes, except barrows, from the breeder's standpoint. Carried.

It was moved by Mr. Malcolm, seconded by Mr. Currie,

THAT the secretary be instructed to submit for the consideration of the Dominion Economic and Development Commission the unjust charge of one-half of one per cent. made by the packers and buyers of Alberta against the producers to cover loss sustained by animals condemned by the Dominion Veterinary Inspectors, and especially to ascertain the value of the meat condemned in a year by the said inspectors, as against the amount actually deducted from the producers at the same points for this purpose. Carried.

Moved by Mr. Malcolm, seconded by Mr. Griffiths,

THAT the Executive Committee be instructed to hold an auction sale of purebred swine in Calgary, on the same dates as the sheep sale to be held by the Alberta Sheep Breeders' Association, and that the dates October 17th to 20th be selected for the first sale, if these dates are agreeable to the Alberta Sheep Breeders' Association. Carried.

Moved by Mr. Stevens, seconded by Mr. Malcolm,

THAT the following general suggestions be made to the Executive Committee in connection with the forthcoming auction sale of swine.

That the swine entered for the sale be judged in their respective classes, and that ribbons be offered as prizes.

That no animal be accepted for sale farrowed after the end of May.

That the upset price for hogs farrowed between the 1st of January and the 1st of June be \$15.00, and on hogs farrowed before the 1st of January of the year of the sale be \$20.00.

That entries be accepted from breeders in the four Western Canadian Provinces provided that the animals offered which have not been bred in the said provinces, shall have been in the province in which the breeder resides from the 1st of January of that year. Carried.

Considerable discussion took place as to the importance of having the age of hogs shown at the shows at Edmonton and Calgary verified by a veterinary if necessary, to prevent an exhibitor from showing in the various classes hogs which are over age.

Moved by Mr. Malcolm, seconded by Mr. Gilbert,

THAT the secretary endeavor to make arrangements with the Hon. Duncan Marshall, Minister of Agriculture, for the attendance of the Provincial Veterinarian at the summer exhibitions and Fat Stock Shows held annually at Edmonton and Calgary in order that he may give expert advice as to the age of hogs when called upon. Carried.

The election of officers then resulted as follows:

President, Lew Hutchinson, Duhamel.
1st Vice-President, H. S. Currie, Castor.
2nd Vice-President, W. J. Hoover, Bittern Lake.
Secretary-Treasurer, E. L. Richardson, Calgary.

Directors:

H. A. Malcolm, Innisfail.
T. E. Bowman, Aldersyde.
R. Ness, De Winton.
E. J. C. Boake, Acme.
Wm. Gilbert, Stony Plain.
G. H. Hutton, Lacombe.
C. L. Milnes, Claresholm.
P. B. Smith, Lloydminster.
S. C. Swift, Viking.
J. L. Walters, Clive.

Moved by Mr. Ness, seconded by Mr. Malcolm,

THAT Mr. Jas. B. Sutherland, C.A., be appointed official auditor for the Alberta Swine Breeders' Association.

Mr. Stevens, Live Stock Commissioner, Edmonton, then addressed the meeting in connection with the outlook for the swine industry of Alberta. He pointed out that at the last annual meeting he had to answer such questions as "How to profitably feed 80 cent barley to hogs which would bring 5 cents a pound?" Conditions since then had, however, very much changed for the better and at this time breeders were justified in feeding grain at the present prices to hogs which were now a fair price. He stated that it was most important that the Economic and Development Commission should endeavor to prevent the causes of the great fluctuations in the prices of hogs in recent years, but he thought it was also most important that Government officials, the Agricultural press and everyone in a position to give advice, should see that they advise newcomers, especially those who intended to specialize in certain kinds of stock, to go into the business in the district adapted to the raising of that particular kind of stock. While the short grass districts were more particularly suited for sheep raising, hogs would undoubtedly do better in the long grass districts. He stated that a great many of the failures had been due to a very considerable extent to mistakes made in location. Mr. Stevens explained that these remarks did not apply to such an extent to raising stock in connection with mixed farming operations.

The meeting then adjourned.

ANNUAL REPORT OF ALBERTA SWINE BREEDERS' ASSOCIATION FOR 1915. Gentlemen:—

I hand you herewith the Annual Report of the Alberta Swine Breeders' Association for the fiscal year ending October 30th, 1915

The history of the swine industry in Alberta provides frequent examples of extremes. Last fall the breeders of swine were faced with a most serious problem owing to the scarcity of feed and the remarkably high price of grain coupled with the low price of hogs, and the industry suffered a severe set back. It is true that in order to prevent the large majority of swine breeders from sacrificing their hogs and going out of the business, breeders were advised to hold their breeding stock. While considering the future this was good advice for those who had feed or could afford to stand the loss of such a course at the time, there were not many who had the courage, and still fewer who could afford the sacrifice. The result was the rushing to the market last fall of great quantities of hogs not fit for market, which of course made a bad market worse. Those who were able to stay in the business are now reaping

the benefit of good prices, and this year's wonderful crop has provided an abundance of feed at reasonable prices. It is most unfortunate that the hog industry has had to go through such experiences so frequently. It is to be hoped that the Economic and Development Commission recently appointed by the Dominion Government will be able to recommend some practical method of preventing such fluctuations in the price of pork.

The Fat Stock Show was held on December 8th to 11th, and the swine entries were very satisfactory considering the condition of the industry at the time. There were 176 entries and four carload exhibits. The awards in the classes shown on foot as well as the carcass competition were placed by Mr. W. F. Stevens, Live Stock Commissioner for Alberta. The list of prize winners for 1914 was attached to the last statement, and for the forthcoming will be attached hereto. The carcass entries were sold to Messrs. P. Burns & Co., on the following basis:

	1st	2nd	3rd	Balance
Purebred or grade, bacon type	12c	11c	10c	9c
Purebred or grade, medium thick	11½c	10½c	9½c	8½c

Regarding the question of shippers of hogs from the C. & E. Line to the Swift Canadian Co., Edmonton, arriving after the street car service had stopped, having to either get in with the hogs or walk from Strathcona to Edmonton as the caboose was taken off the train at Strathcona. Shipments usually arrived in the middle of the night, and a serious inconvenience resulted. The matter was taken up with the general superintendent of the C. P. R. at Calgary by Mr. J. L. Walters, one of your directors, and the undersigned, and arrangements were made for the caboose to stay with the train until taken over by the C. N. R.

The question of the advisability of holding an auction sale of swine each fall should be discussed by the Association. It is probable that the Alberta Sheep Breeders' Association will hold a sale of sheep, and it might be a means of encouragement to breeders and a convenience to purchasers if a similar sale were established for swine.

The end of the fiscal year of the Association was changed at the last annual meeting from the 31st of December to October 31st. We therefore present herewith the financial statements for 1914 and 1915. Owing to the increase in the profits from registrations from the Province of Alberta, shared alike by the Edmonton and Calgary shows, there is a very satisfactory balance on hand. No doubt a grant will, as usual, be made from the Association towards financing the Fat Stock Show.

We are again indebted to the Alberta Department of Agriculture for their co-operation and financial assistance, and for supplying judges for the Fat Stock Show. We also express our thanks for the financial assistance given to the forthcoming Fat Stock Show by the Live Stock Commissioner's branch of the Dominion Department of Agriculture.

Respectfully submitted,

E. L. RICHARDSON, Secretary.

FINANCIAL STATEMENT ALBERTA SWINE BREEDERS' ASSOCIATION, 1914 INCOME

Alberta Government Grant	\$200.00
Registration Fees	289.30
Membership Fees	46.00
Balance from 1913	96.72
Overdraft	19.15

\$651.17

EXPENDITURE

Grant to Fat Stock Show	\$200.00
Freight Charges F. S. S.	123.48
Prizes	35.00
Printing	13.50
Secretary	100.00
Office Help	37.50
Travelling Expenses	95.04
Western Canada Live Stock Union	25.00
Office Expenses and Postage	22.65
Calgary, March 6th, 1915.	

Audited and found correct.

\$652.17

(3gd.) James B. Sutherland, C.A., Auditor.

APPENDIX E.

ALBERTA FAT STOCK SHOW, CALGARY.

TWELFTH ANNUAL REPORT.

HON. DUNCAN MARSHALL.

Minister of Agriculture.

SIR,—I have the honour of presenting herewith the proceedings of the Annual meeting of the Alberta Provincial Fat Stock Show held in the offices, Calgary, Tuesday, December 14th, 1915, together with the Twelfth Annual Report of the Fat Stock Show which was presented at that meeting.

MINUTES of meeting of the Executive Committee of the Alberta Fat Stock Show held in the Association offices, Victoria Park, Calgary, 14th December, 1915.

PRESENT: Mr. W. F. Stevens, president, in the chair, Messrs. Jas. Sharp, vice-president, Alberta Cattle Breeders' Association, R. Knights, president, Alberta Sheep Breeders' Association, Lew Hutchinson, president, Alberta Swine Breeders' Association, P. M. Bredt, vice-president Alberta Sheep Breeders' Association and of the Alberta Cattle Breeders' Association, and E. L. Richardson, Secretary and Managing Director of the Alberta Live Stock Associations.

The minutes of the last annual meeting were adopted as read.

The secretary presented the financial statement for the fiscal year ending 31st December, 1914.

It was moved by Mr. Hutchinson, seconded by Mr. Sharp:

THAT the financial statement and annual report be received and adopted as read. Carried.

The question was discussed as to how many entries should be permitted from each person in the dressed carcass competition in order to avoid making the carcass competition a means of selling animals instead of a competition.

It was moved by Mr. Sharp, seconded by Mr. Knights:

THAT each exhibitor will be permitted to enter two animals in each of the classes of the Dressed Carcass competition, and that entries may be made in the dressed carcass competition from the carload and pen classes as well as from individual classes;

THAT entries from the dressed carcass competition shall close the same date each year as the date for closing regular entries, but dressed carcass competitions having less than eight entries when entries close, may be thrown open for additional entries up to 6 p.m. the first day of the show.

Carried.

Owing to there being 23 and 24 entries respectively in the classes for ewe or wether shearing or over, and ewe or wether of calendar year, it was decided to divide these classes into two, one for ewes and one for wethers.

It was moved by Mr. Hutchinson, seconded by Mr. Knights:

THAT the following be the judges for the Fat Stock Show:

John A. Turner, Cattle and Sheep Classes.

H. W. Scott, Swine.

W. F. Stevens, Dressed Carcasses.

Carried.

Regarding the Boys' and Girls' classes, it was decided that while it might be impossible in every case for the boy or girl to be present to hold their own animals, the committee ask the parents to have the owners in these classes present if possible.

The secretary reported that the president and himself had made arrangements to sell the dressed carcasses to Messrs. P. Burns & Co. on the following basis:

SWINE.

	1st.	2nd.	3rd.	Balance
Pure-bred or grade, medium thick	20c	17c	15c	12c
Pure-bred or grade, bacon type	20c	17c	15c	12c

SHEEP.

Purebred or grade shearing, ewe or wether	1st. 25c	2nd. 22c	3rd. 20c	Balance 18c
Purebred or grade lamb of celendar year	30c	27c	24c	20c

CATTLE.

Purebred or grade steer	15c	13c	12c	11½c
Purebred or grade female, 3 years or over	14c	12c	11c	10½c
Purebred or grade female, under 3 years	14½c	12½c	11½c	11c

The following officers were then elected for the ensuing year:

President, W. F. Stevens, Live Stock Commissioner.

E. L. Richardson, Secretary and Managing Director, Alberta Live Stock Associations.

Jas. B. Sutherland, C.A., Official Auditor.

The meeting then adjourned.

Report to the Executive Committee of the Alberta Fat Stock Show for the fiscal year ending 31st December, 1914.

Gentlemen,—Following the usual course the report of Cattle, Sheep and Swine classes of the Fat Stock Show, and a list of the prize winners, etc., has been made in the annual reports of those Associations.

The financial statement for the past fiscal year which has been duly audited by your official auditor, is as follows:

Receipts, 1914.

Alberta Government Grant	\$2,000.00
Dominion Government Grant	325.00
C. P. R. Grant (1913 Show)	405.00
Alberta Swine Breeders' Association.....	200.00
Swift Canadian Co.	25.00
Thos. Laycock	20.00
	\$2,975.00
Entry Fees	230.50
Transportation Fees	184.46
Sundries	7.01
Overdraft 31st December, 1914	1,126.55
	\$4,523.52

Disbursements.

Prizes	\$1,518.00
Freight	213.38
Grounds Expense	265.90
Office Expense	243.08
Printing and Advertising	179.67
Other Expenses	17.10
Total Expenses, 1914.	2,437.13
Overdraft 31st December, 1913.	1,073.04
Note and Interest, account 1913.	1,013.35
	\$4,523.52

Calgary, 9th March, 1915. Audited and found correct.

(Signed) JAMES B. SUTHERLAND, C.A., Auditor.

We are indebted to the Dominion Department of Agriculture and to the Dominion Live Stock Commissioner for a grant amounting to \$759.00 towards the forthcoming Fat Stock Show. In view of this grant the prize list has been increased by approximately \$1200.00 in anticipation that between seven and eight hundred dollars of the increase would actually be awarded.

From the splendid increase in the entries at the forthcoming show, it would appear that a larger percentage of the additional prizes than that anticipated would be awarded.

I desire to express our appreciation to the Alberta Department of Agriculture for the financial assistance in aid of this show from year to year, and also for supplying judges, and in every way co-operating with the Associations.

Respectfully submitted,

E. L. RICHARDSON, Secretary.

APPENDIX F.

TENTH ANNUAL REPORT OF THE ALBERTA NATURAL HISTORY SOCIETY.

TO THE HON. DUNCAN MARSHALL,

Minister of Agriculture,

Edmonton, Alberta.

SIR,—I have the honour to submit herewith the Tenth Annual Report of the Alberta Natural History Society for the year 1915.

The Annual Meeting was held on Wednesday, 24th November, 1915, in the Library of the City Hall, Red Deer.

The chair was occupied by the President, Mr. R. E. Fiske, Hillsdown.

PRESIDENT'S REPORT.

Mr. Fiske noted with regret that little progress had been made in furthering the aims of the Society, chiefly on account of people not being sufficiently interested in the pursuit of natural history work. The field day had been a very successful one, and a fine list of botanical specimens then collected had been properly and scientifically named. Great improvement in the exhibits at the show, for which prizes had been offered, had been noted. One really excellent collection of insects contained 83 varieties, for which an extra prize was awarded. A composition of 23 pages of foolscap relating to bird life was very good, as was also a collection of flowers. Altogether the work was an advance on that of last year. The President expressed the hope that the arrangements for the coming year would give better results than the work of the preceding one. He also remarked that one of the Society's objects was to help farmers recognize various insects and other pests, and instanced Mr. Whitehouse's articles dealing with this subject, and published in the local press, which had been of benefit to many.

VICE-PRESIDENT'S REPORT.

Mr. Whitehouse also regretted that the aims of the Society had not been greatly advanced, but the individual work had made considerable progress. Personally speaking, his correspondence with Entomological Societies and Scientists in Edmonton, Ottawa and England, and also in helping farmers, had been large. In the evening he intended reading a paper on insect pests and methods of destroying them. Mr. Whitehouse paid a tribute to the work of the President, Mr. Fiske, to advance the aims of the Society.

REPORT OF RED DEER BRANCH.

Mr. Pamey, Secretary of this Branch being unable to attend, Mr. Whitehouse read the report of the Branch as follows:

Owing to more pressing business very little active work had been undertaken by this Branch during the current year. The attendance at the Annual Field Day on July 3rd, numbered fifteen members. Mrs. Dr. George and Miss Cole acted as botanical guides, and some 63 varieties of plants were collected, a list of which is appended. The gentlemen present investigated the insect life of the Tamarac Swamp, which was the place visited by the party.

The Annual Meeting of this Branch was held at the residence of Dr. George on November 4th, 1915, when the following resolution was adopted:

"That it is not in the best interests of the Alberta Natural History Society that its membership and resources be split up into various branches as in the past, therefore be it resolved that the Red Deer Branch of the Alberta Natural History Society and its funds and records be turned over to the parent Society."

The funds of this Branch amount to \$71.50.

Mr. Whitehouse moved the adoption of the above report.

Dr. George, President of the Red Deer Branch, owing to the stress of business, was unable to prepare a written report, but gave observations on birds, etc., and spoke of the benefit of the re-organization of the Society as outlined by Mr. Whitehouse, and trusted it would prove a good step forward towards the study of Natural History in Alberta.

REPORT OF INNISFAIL BRANCH.

Mr. Geary, President, reported that a certain amount of individual work had to be done, and his advice had been frequently asked in preventing the spread of insect and plant pests. In the majority of cases he had been able to supply necessary information. Otherwise he had secured the desired information from different quarters. He had collected notes on the Forest-Tent Caterpillar, but was away during July and August when these pests were at their worst. He thought that these insects were dying out, owing perhaps to the increase of birds in this territory. He reported that only three members of the Innisfail Branch were left, but hoped to do further work during the winter, and more field work next year. The assets of this Branch comprise a good library, and cash in hand amounting to \$45.00.

REPORT OF ERSKINE BRANCH.

Mrs. Judd, President, stated that the membership of this Branch was small, but a good deal of individual work had been done. Mrs. Morton, the Secretary, handed in her report. The assets of the Branch comprise a small library, and funds amounting to \$39.40. Two prizes were presented at the Stettler District Fair; one for the best collection of wild flowers and awarded to Emanuel Gray; and one for the best collection of pressed flowers, awarded to Grade IX of the Stettler High School. A field day was held at Buffalo Lake on July 7th. A discussion followed regarding the giving of prizes for collection of flowers in the school at Erskine.

REPORT OF THE SECRETARY OF PARENT SOCIETY.

Mrs. George, Secretary, reported as follows:

During the year four executive meetings were held. Prizes were offered by the Society for Natural History exhibits at the local fairs, the following being awarded:

Collection of Alberta Wild Flowers: Marjorie Allen, Red Deer.

Collection of Alberta Insects: Lilian Gudmundson, Red Deer.

Blake Allen, Red Deer.

Composition on Bird Life: Millie Meeres, Red Deer.

The Society gave a grant of \$40.00 to the Red Deer Library Board, to purchase books on Natural History subjects. Grants of \$10.00 each were made to Branches at Innisfail and Erskine, and \$25.00 to the Red Deer Branch.

Total Receipts	\$ 266.44
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Total Expenditure	160.50
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Balance on hand	\$ 105.94
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A notice of motion was read by Mr. F. C. Whitehouse as follows:

"That to achieve the purposes of the Society as set out in Sec. 2, A. B. and C. of the Constitution, a large membership and a nominal annual fee are desirable. Be it therefore resolved that Section 3 (a) be amended to read as follows: (a) Twenty-five cents shall be the annual fee for the Alberta Natural History Society."

ELECTION OF OFFICERS FOR 1916.

Hon. President, Hon. Duncan Marshall.

Vice-President, H. A. Craig.

2nd. Vice-President, E. Michener, Esq., M.P.P.

President, Dr. H. George.

Vice-President, Mr. R. E. Fiske.

Directors:—Mr. W. Geary.

Mrs. Greene.

Mr. C. B. Horsbrugh.

Mrs. Cottingham.

Mrs. Pameley.

Mrs. George.

Miss Cole.

EVENING SESSION.

The following papers were read:

Mr. F. C. Whitehouse, "Aims and Opportunities of a Natural History Society."

Paper on Entomology. Report for the year 1915.

Discussion followed on Insect Pests and their destruction.

Paper on Botany by Mr. Geary.

Paper on birds of Alix and Buffalo Lake districts by Mr. C. B. Horsbrugh.

Entomological, botanical and bird exhibits.

Mr. C. B. Horsbrugh was appointed Sec.-Treasurer for the year 1916.

THE FUNCTIONS OF NATURAL HISTORY SOCIETIES.

(By F. C. Whitehouse, Vice-President.)

Our Constitution clearly states certain objects and purposes of the Society and it would be well first to deal with these. (a) "To assist farmers in recognition of beneficial and injurious insects, birds and plants, and to advise regarding the control or destruction of those that are injurious."

This, in itself, is a large order, for first we must identify the injurious and beneficial insects, birds and plants, and secondly by all means in our powers pass on our knowledge to agriculturists and horticulturists in order that practical use may be made of it. Undoubtedly the best medium for this purpose is the public press.

(b) "To promote interest in, and the study of, the economic and scientific phases of the various branches of Natural History."

To achieve these objects the most apparent methods appear to me as follows:

(1) To build up our membership so that as many as possible may benefit by our meetings, and to this end I think the adoption this afternoon of a purely nominal membership fee is a step in the right direction.

(2) To place at the disposal of our community a first class selection of books upon Natural History. This excellent object is already well advanced since money grants made by this Society to the Red Deer Library have made accessible to everyone a carefully selected library covering practically all branches of Natural History.

(c) To establish public collections and also collections in connection with our schools.

It has been a practice of this Society to offer prizes annually to school children for the best collections of botanical specimens and insects. In order, however, that children may acquire even the rudimentary knowledge of Natural History, and the technique of collecting, they must look to some one for instruction and encouragement. Obviously the members of this Society cannot get in touch with the individual children throughout the district. They can, however, as a body extend to the children's teachers the benefits, knowledge and assistance of the Society, and I think we should do all in our power to let it be generally known among teachers that in the matter of Natural History we are both willing and anxious to co-operate with them.

So far I have dealt only with the avowed purposes of the Society as an educational factor. I should now like to deal briefly with the scientific ambitions and aims of such a body.

In older countries, by patient study (collecting and research) a complete record has been established of the flora and fauna. The range is known of living things and their life histories recorded. In Canada this work is only in its infancy, for not only have men had the sterner realities of life to engage their attention, but the very size of the land has made the task increasingly difficult. Insects probably affect the welfare of man as much, if not more, than any other group in the animal kingdom, yet to date there is no authentic catalogue of the insects of Canada. The colossal task is now in hand, and to such an endeavour should we lend our aid. The birds were catalogued by Macoun in 1909, but the work should be checked, and supplemented by continual observation. I am but little qualified to speak on the science of botany but do not doubt that much is yet to be accomplished. In 1913 the Dominion Government published a check list of Canadian fish. In this we learn that the Western limit for pickerel, perch and goldeyes is Saskatchewan, all of which are taken here in Alberta. I do not point out these errors in criticism of an excellent and laudable undertaking, but to exemplify the point I am endeavouring to make, viz., that naturalists and Natural History Societies should gather and place on record accurate data upon all branches of natural science, to the end that those entrusted with the compilation of scientific records may have ample information to work upon and that ignorance may no longer walk in our midst.

NEIGHBORHOOD STUDIES IN PLANTS, INSECTS AND BIRDS.

Below are set out the results of activity by the Society and by individual members in the study of the plant, insect and bird life of the Red Deer district.

Botanical Specimens Collected on Field Day, July 3rd, 1915.

1. Baneberry or *Actaea Spicata*. Crowfoot family.
2. Kinnikinnick or Beraberry. *Arctostaphylos Uva-ursi*.
3. Comandra, pallida. Sandalwood family.
4. Red Stemmed Dogwood. *Cornus Stolonifera*.
5. Fleabane. *Erigeron Philadelphicus*.
6. Flag Honeysuckle. *Lonicera ciliata*.
7. Honeysuckle. *Lonicera glaucescens*.
8. Snowberry. *Symphoricarpos racemosus*.
9. Lungwort. *Mertensia paniculata*.
10. Painted Cup. *Cattilija Coccinea*.
11. Plantain. *Plantago Major*.
12. Northern Bedstraw. *Galium Boreale*.
13. Horse Tail. *Equisetum Palustre*.
14. Two Leaved Solomon's Seal. *Unifolium Canadense*.
15. Three Leaved Solomon's Seal. *Smilax cina Tripolia*.
16. Scarlet Lily. *Lilium Philadelphicum*.
17. Blue-eyed Grass. *Sisyrinchium Candidum*.
18. Yellow Orchid. *Cypripedium*.
19. Pink Fly Spotted Orchis. *Orchis Rotundifolia*.
20. Small Northern Bog Orchis. *Habenaria Obtusata*.
21. Tall Leafy Green Orchis. *Habenaria Hyperborea*.
22. Comandra. *Comandra Pallida*.
23. Grass of Parnassus. *Parnassia Palustris*.
24. Red Currant. *Ribes Rubrum*.
25. Wild Rose. *Rosa Acicularis*.
26. Loco Weed. *Oxytropis Lamberti*.
27. Gooseberry. *Ribes Setosum*.
28. Arctic Raspberry. *Rubus Arcticus*.
29. Creeping Raspberry. *Rubus Pedatus*.
30. Ascending Vetch. *Astragalus Adsurgens*.
31. Milk Vetch. *Astragalus Racemosus*.
32. Wild Canada Mint. *Mentha Canadensis*.
33. Crow Vetch. *Vicia Cracca*.
34. Hedysarum (Purple). *Hedysarum Boreale*.
35. White Geranium. *Geranium Richardsoni*.
36. Wood Violet. *Viola Canadensis*.
37. One Flowered Wintergreen. *Pyrola Uniflora*.
38. Red Wintergreen. *Pyrola Asarifolia*.
39. Canada Blueberry. *Vaccinium Canadensis*.
40. Woolly Labrador Tea. *Ledum Catifolium*.
41. Silver Berry. *Elacagnus Argentea*.
42. Buffalo Berry. *Shepherdia Canadensis*.
43. Cotton Grass. *Erophorum Cypripedium*.
44. Bunch Berry. *Cornus Canadensis*.
45. Blue Columbine. *Aquilegia Brevistylis*.
46. Mitre Wort. *Mitella Brewaria*.
47. Penny Royal. *Hedeoma pinnatifida*.
48. Meadow Rue. *Thalictrum Alpinum*.
49. Anemone. *Anemone Multifida*.
50. Seneca-Snakeroot. *Polygala Senega*.
51. Twin Flower. *Linnaea Borealis*.
52. Coltsfoot. *Potamogeton Palmata*.
53. Sarsaparilla. *Aralia nudicaulis*.
54. Potentilla. *Potentilla Anserina*.
55. Avens. *Geum Triflorum*.
56. Yarrow. *Achillea Millefolium*.
57. Cleavers. *Galium Triflorum*.
58. Shrubby Cinquefoil. *Potentilla Fruticosa*.
59. Black Birch. *Betula Lenta*.
60. Tamarack. *Larix Laricina*.
61. Mustard. *Brassica Nigra*.
62. Sedge. *Carex Oligosperma*.

ENTOMOLOGICAL REPORT

By F. C. Whitehouse.

Malacosoma Disstria—The larvae of The Forest Tent Caterpillar made their appearance early in June, and by the end of that month had done considerable damage to the foliage of white poplars, in the city to some extent, but to a greater extent in the country. West of Burnt Lake I inspected large poplar bluffs entirely denuded of leaves. On the Calgary trail, in the vicinity of Archdeacon Dewdney's, the pest was disagreeably plentiful. The moths emerged late July and early August. The egg clusters deposited at that time on the upper twigs of white poplar have been plainly discernable since the fall of the leaves. I forwarded some two hundred cocoons to the Dominion Entomologist, Ottawa, in early July, but I have not as yet been advised on the parasite destruction. I do not wish to be considered a pessimist when I state that I believe this pest will be still more troublesome next year.

Cutworms—Some horticulturists contend that cutworms are more troublesome in a wet season, some in a dry one. So far as my observations go, however, the exceptionally wet year of 1915 proved nothing. Cutworms were neither more nor less plentiful than in the average year, and my own contention is that "like the poor they are always with us." One peculiar fact I might mention, viz, that whereas I take the adult insects, i.e. (moths) of such notorious cutworms as *Euxoa ochrogaster* (the red-backed cutworm); *Feltiaducens* (the dingy cutworm); *Noctue claudistina* (the W-marked cutworm); *Peridroma saucia* (the variegated cutworm), etc., it is only the first of these that in the larval stage I ever find doing damage in my own garden. Whether this is pure coincidence or that in this particular district the rest prefer vegetation other than that cultivated by man I cannot say.

Rachela Bruceata—Again this year in October this moth (or rather the male, for the female is wingless) was flying in hundreds after dusk. The insect deserves the attention of economic entomologists since in some districts the larvae are almost as destructive to the foliage of white poplar as the Forest Tent Caterpillar. So far, however, in the Red Deer territory I have not discovered any serious case against them.

Galerucella Decora—Commencing late June and early July, the foliage of willow throughout our district showed signs of being seriously affected. As the summer wore on the leaves turned brown and died, disfiguring the landscape. The pest in this instance was a beetle, named *Galerucella decora*. The season of the insect appeared interminable, since as late as the third week in October I inspected black currant bushes covered with the adult beetles. They were busy eating the upper surface of the leaves. The true food-plant is willow and poplar, but like most pests they will apparently resort to other vegetation when their true food is no longer obtainable.

Early in September, that is to say, when farmers were cutting grain, innumerable cases were reported to me of oats being covered close to the head by small insects. In some instances the canvas on binders had to be removed and cleaned every ten acres, being completely clogged by a conglomeration of the insects. Unfortunately at the time no actual specimens taken from the oats were brought to me, so that I was unable to make specific identification. I later made sure, however, that the insects were Aphidae and in October obtained a number in Red Deer that appeared to answer the description of the pest on the oats. I forwarded a number to Ottawa and hope at a later date to publish in the local papers a report upon the pest. In all Nature no creatures have a more extraordinary life history than the Aphidae. They are qualified to be a dangerous pest, but happily are usually well held in check by their numerous natural enemies.

Odonata—During the past summer I have devoted some of my time to the sub-order Odonata, dragon flies, and collected a number of different specimens in the Red Deer district. By the kindness of Prof. E. M. Walker, M.D., of Toronto University, the recognized Canadian authority on this sub-order, the identity of all the dragon flies taken this year and next will be established. I hope therefore at the Annual Meeting of this Society for 1916 to submit an authentic list, as complete as possible, of the dragon flies of the district.

Lepidoptera—Butterflies and Moths—New Records—I am again able this year to report new records for Alberta of moths taken by myself in this district, viz:

Drybota illocata—Red Deer, first week September.

Xylina innominata—Red Deer, 30th August.

Xylina capaz—Blackfalds, 17th-24th August.

(A rarity wherever it occurs)—At Blackfalds 17th-24th August, and Red Deer, 25th August to 7th September, I also took a good series of Red Underwings: *Catocala unijuga*; *Catocala briseis*; *Catocala relict*a and another *Catocala*, which after investigation is believed to be semi-relict.

In the spring I published in the local papers short articles upon the House-fly; the Forest Tent Caterpillar and Cutworm, and also one in which I endeavoured to briefly show the economic value of birds.

Yours Faithfully,

F. C. WHITEHOUSE,

Vice-President.

ORNITHOLOGICAL NOTES FROM THE ALIX AND BUFFALO LAKE DISTRICTS, PROVINCE OF ALBERTA, CANADA, 1914.

(By Charles B. Horsbrugh)

(From the Ibis for October 1915, pp. 670-689.)

The following notes concerning the birds of this particular part of the province of Alberta relate to those whose identity I am certain of. The list might have contained a few others, but I hesitate to include uncertainties, which another season will unfold. This district, wherein I have resided since April, is well wooded and is fairly hilly, with numerous small and large sloughs. To paraphrase a well-known song, it can be stated that "every little homestead has a snipe-marsh of its own," and bird life, except in winter is abundant.

Buffalo Lake, which lies about seven miles north-east of Alix, is a huge expanse of water, roughly about twenty-one miles long by eight miles broad, with a coast line, so report says, of about two hundred miles. Bird life there is also abundant and interesting, but the advance of civilization has caused many of the larger birds, such as pelicans, cormorants, gulls, etc., which frequented the lake in olden days, to depart elsewhere. Of late years the ducks are following the example of the pelicans and cranes, owing to ruthless slaughter and slack or inefficient preservation though good sport is obtained still by the local sportsmen. This last season was an excellent one for Ruffed Grouse and Prairie Chicken, but I believe a poor one for geese.

The village of Alix is situated on rolling, well wooded country about half way between the well known towns of Edmonton and Calgary. It is an important railway centre, and the Canadian Pacific, Grand Trunk and Canadian Northern railways cross each other at this point. For the last seven years the average rainfall has been 17.52 inches.

I have followed the nomenclature and classification of the A.O.U. check list.

Aechmophorus occidentalis. Western Grebe.—At Haunted Lakes, on May 17, two pairs of Western Grebes were swimming about side by side, repeatedly lowering their beaks to lightly touch their shoulders for a second's duration. A few more pairs arrived by the 24th, and yet more towards the end of the month, when they then began to build their nests.

On June 1, I went for ten days to Buffalo Lake, and counted six pairs, but towards the end of my visit, from one spot I observed thirty-two pairs and there must have been many more in other parts of this huge expanse of water. I preserved a dead specimen presented me by a farmer, and found its gizzard full of the bird's own feathers and water weeds. Nesting had just begun when I arrived at the lake, and I found many nests, the majority containing from one to three eggs. These were usually concealed under the rotting vegetation used in the construction of their nests, and were placed amongst the reeds bordering the edge of the lake. Close to this colony we found numerous nests of the Pied-billed Grebes, but no full clutches were seen—the Crows probably accounting for many a despoiled nest.

On November 19, I received a fine male Western Grebe from a friend in Alix which, for the time of year, surprised me, although I have heard reports about these birds being frozen into the ice, so late have they delayed migration.

Colymbus holboellii. Holboell's Grebe.—The loud queerysome wail of this species during the mating season seems to be uttered at all times of the day and night. On a small lake opposite our house, in which we dwelt for our first three months in Alix, a pair appeared on May 7, and I observed them closely during this period. As soon as the hen bird began to sit (about

May 25) they were fairly quiet and became so tame that I could approach close to the nest, but the moment I was discovered, the female would at once start to rapidly and thoroughly cover her eggs. Although I found a number of nests of this bird in the neighbourhood of our village, I never observed more than five eggs in a clutch. Mr. F. M. Chapman states the clutch to consist of from three to eight eggs.

Holboell's Grebe seemed to be rare on Buffalo Lake.

It is a curious sight to witness the courting antics of these birds. A pair may be swimming about within a short distance of one another, when the male, on the nearer approach to the female, suddenly raises his body at right angles to the water and vigorously pursues her for a yard or two. The latter also progresses in this curious fashion, and both birds always wait at the top of their voices. This weird performance is gone through several times in the course of the day, and possibly night.

Colymbus auritus. Horned Grebe. On another small lake close to our house I noticed a single bird of the above species on May 3rd., and three more on the following day. A few days later, whilst watching a pair of Golden-eye and Canvas-backed Ducks on this same spot, I saw a female Grebe dive and viciously nip the male Canvas-back on the belly. The latter, after being thus "torpedoed," flew off to more peaceful waters.

These Grebes also assume quaint courting attitudes: one of the most usual is that the male bird lays his head and neck parallel with the water, at other times hunching up his back and keeping head and neck in-drawn to the body. I do not remember ever seeing these birds take flight. They were common everywhere as the nesting season approached, and as a rule were remarkably tame. On May 13 a pair were busy nest building, and by the 18th had made a bulky structure, which had its base on the bottom of the lake in about two feet of water. The birds swam right up to me whilst immersed to my knees, but were voiceless. By the 30th of the month another nest on a small pond contained four fresh eggs, whilst the pair previously mentioned had two eggs.

Podilymbus podiceps. Pied-billed Grebe.—On June 2, at Buffalo Lake, I obtained an excellent photograph of a nest containing seven eggs, and at Spotted Lake found a fairly large colony on June 19 (see note under Franklin's Gull). These birds appeared much more wary than the Western and Holboell's Grebes.

Gavia immer. Great Northern Diver or Loon.—Badly-mounted specimens of this handsome bird are generally exhibited in most taxidermists' shops in this country. It does not appear to be as common as I expected to find it, and my notes are therefore scanty. It was reported to me that a specimen was to be seen on the lake at Alix village on May 20, and I saw this bird and its mate there on June 7. I could find no trace of a nest. Their weird cries reminded me of the time when my friend Dr. Bowdler Sharpe and I used to watch them on the Sundalsoren fiord, Norway, in May and June, 1899. I have reason to believe that another pair reared one young on a lake about four miles south of Alix. On Buffalo Lake they appear to be very rare. Mr. George Cook informed me he picked up a dead specimen in June of the present year on the shore, and Mr. James Brindle told me he saw one on June 3. I saw no specimens during my visit there.

Larus marinus. Greater Black-backed Gull.—On entering Halifax Harbour, March 28, a few of these Gulls were observed.

Larus franklini. Franklin's Gull.—On April 24, three Franklin's Gulls were seen near Alix, and on May 4 six in the same locality. From this date onwards they were one of the commonest birds over a wide tract of country. On Buffalo Lake and many small lakes during June and July they congregated by the thousand, and were always particularly noisy. This species does not appear to nest on the lake, although feeding there extensively; but on a fair sized expanse of water within a mile or two of the village of Mirror they do so abundantly. This swamp is called Spotted Lake, on account of the numerous and isolated clumps of reeds of varying sizes. I visited this colony with my friend Mr. George Cook, of Buffalo Lake, on June 19. My notes for this day's trip read as follows:—"To enter the lake we had hard work towing a punt against the stream of a narrow canal, which was one of the exits for the overflow of water, for about two miles. During our progress we flushed several Spotted Sandpipers and a Short-eared Owl from the banks. We also discovered a Scaup's nest at the bottom of the bank, containing ten eggs, which were almost awash, the nest being hardly worthy of the name. Entering the lake we soon found quantities of Gull's nests and

young in downy plumage everywhere. Their nests somewhat resemble Coots', being fairly bulky affairs made entirely of dead reeds. We found them in colonies amidst the reedy patches, and the majority of the nests contained two eggs, all of which seemed on the point of hatching out. We computed the number of Gulls in this spot to approach four thousand. Their noisy clamour could be heard for a considerable distance. A fair sized colony of Pied-billed Grebes also nest amongst the reeds, and although numerous nests were found none contained more than three eggs. A nest of the Canvas-backed Duck with six eggs of the Common Pochard was found completely submerged, doubtless on account of the heavy rains during the early part of the month. We noticed one Common Tern and only a few pairs of ducks (sp?). Dr. Henry George of Red Deer took two eggs of the Sand-hill Crane on this lake in 1895, but I believe these birds have long since ceased to nest hereabouts."

My wife and I managed to rear a young Franklin's Gull to maturity, feeding it at first on hard-boiled eggs and bread, and at the present time of writing we hear it is doing well in the Zoological Gardens at Vancouver, B.C. The bulk of the Gulls appear to migrate south about the beginning of August, but a few were observed at Alix on September 17, and a little later at Buffalo Lake.

Larus argentatus. Herring Gull.—This seems to be a rare bird and, I am informed, used to nest on the islands in Buffalo Lake. I only observed a pair there on June 2 and another on the 7th.

Sterna hirundo. Common Tern.—I first observed this species at Haunted Lakes, outside the village of Alix, on May 17, where a few were diving for fish at the narrows of the lake. On a small neighbouring lake I found these birds breeding. On a point of a small island they had laid their eggs in the dried sandy mud, and I found about six or seven nests, each containing two eggs. This Tern is far less numerous than the Black Tern in this part of the country.

Hydrochelidon nigra surinamensis. Black Tern.—I found this a very common bird during the spring and summer months, nesting in small colonies on many a little slough and back water. The nests, composed of water-weeds and decayed grasses and reeds, are often fairly bulky structures about four or five inches high. Considerable variation exists in regard to size and colour among the eggs of this species. The young soon after hatching are very difficult to discover amongst the long grass on the sloughs. At Buffalo Lake, on June 2, I found several completed nests but only one egg. I was informed that hundreds roost in the reeds around this lake.

Anas platyrhynchos. Wild Duck.—Together with the Greater Scaup this is the commonest species here. It arrived about April 7. I found many nests, the first, containing eleven eggs, being at Haunted Lakes on May 17. This species frequently has its nest far from water, and a favourite situation is in the growing corn.

Chaulelasmus streperus. Gadwall.—On a small slough in the vicinity of Buffalo Lake I saw a pair of Gadwall on May 16, but I feel sure this species must have arrived here a week or two prior to this. I would say that they were not particularly abundant hereabouts.

Mr. Atkinson, who also visited Buffalo Lake at the same time as I did, found a nest with eight eggs on June 5.

Mareca americana. American Widgeon.—Usually known as the Baldpate in this country. Nowhere very common. The first pair was observed near our house on May 4.

Nettion carolinense. Green-winged Teal.—Fairly abundant. One specimen was observed on April 24 on a small pond near our house, and two pairs on May 4. They nest in the long grassy tussocks bordering the sloughs.

Querquedula discors. Blue-winged Teal.—Decidedly more abundant than the former species. My first sight of this bird here occurred on May 7, when I flushed five pairs from a flooded meadow close to Alix, where they feed on very minute water-snails, also water-weeds. On August 13 I noticed a small brood of rather young ducklings of this species close to Alix.

Spatula clypeata. Shoveller.—First pair seen here on May 7. A fairly abundant species. Mr. Atkinson found eggs on June 8 at Buffalo Lake, and we frequently saw parties of ducklings with the female every day during our stay. On July 3 a Shoveller duck was swimming about with eight quite small young on a small pond near our new home. On August 18 I saw some well grown ducklings close to our house, almost ready to fly.

Dafila acuta. Pintail.—Several birds seen on May 4. Fairly numerous and quite as shy as at home.

Marila americana. Pochard.—Known here as the Redhead. According to my notes this species appears to be a late arrival as I have no record of it until May 27, when a pair was seen close to our home, on one of the smaller ponds. This bird shares its incubation duties with the Canvas-back Duck, and both Atkinson and myself often found nests containing eggs of the two species. One such nest which I found near Buffalo Lake on June 5 held sixteen eggs. So over crowded was it that two eggs lay under water outside the nest. I flushed a Canvas-back, the bulk of the eggs belonging to the other species. It is only fairly common in these parts.

Marila vallisneria. Canvas-back.—April 7 is my earliest record for its advent here. During the mating season these ducks become very tame, and I have often called them close to me, lying concealed in the bushes. By moving a hand slowly they evince curiosity and approach gradually to investigate. They are quite at home in company of other ducks, as my notes for May 17 read that a pair were feeding on a small lake together with pairs of Scaup, Mallard, Buffle-head, Widgeon, Green-winged and Blue-winged Teal, as well as a noisy pair of Holboell's Grebes. I found a nest of the Canvas-back containing eleven eggs on Haunted Lakes, near Alix, on May 24. This was a bulky structure, much like a Coot's, as it was made entirely of decayed reeds. The eggs were covered with a little down and partially hidden under cover of the same nesting materials. This same patch of reeds also held several nests of Hoboell's Grebe. Old residents inform me that this species is yearly decreasing in numbers.

Marila marila. Greater Scaup.—A single pair was first noticed here on May 5. Excepting the Mallard, this species seems to be the commonest in this locality. During my trip to Buffalo Lake I must have seen hundreds. Atkinson, on June 5, found a nest containing eight eggs hidden amongst the branches of a small bush. A local name for this bird is "Bluebill."

Clangula clangula americana. American Golden-eye.—In pairs and fairly numerous about April 7. They seemed to become rarer towards the nesting season, and I did not find any trace of nests or young birds.

Charitonetta albeola. Buffle-head.—My notes for April 24 state that these ducks were to be seen in small numbers on all the ponds hereabouts, and in pairs. They feed at this season on a small red worm-like larva (mosquito?), minute stones, and water-weeds. On May 16 I was giving some horses their morning hay, when I suddenly saw a pair of Buffle-heads fly round the barn a few times and the duck dive like an arrow straight into an old decayed poplar tree. The nesting site was an ancient Golden-winged Woodpecker's, about eighteen feet above the ground, and with the aid of a thin twig I could feel a large clutch of eggs. On the lake just below the barn I saw a hen bird on June 18, followed by five young ducklings, which I watched for many days. The feet of the ducklings are dark slate, and I should like to know when they assume the striking flesh-coloured tint of the adult. Whilst driving a few miles south of Alix with my wife, on June 21, we almost ran over a duck with five young. She was leading them through the long grass towards water (some considerable distance from the trail) and was a most devoted parent, flying around very close to us until we passed on. These birds are excellent eating, but if wounded are almost impossible to retrieve on account of their diving powers. The local name given them is "Butter-balls." This species seems to be fairly plentiful in this part of the province, but so shy are they in the vicinity of their nesting sites that the latter are rarely betrayed. I located two other nests, but could not find the exact spots. These birds are reported to nest in holes in the ground if suitable trees are scarce.

Oidemia deglandi. White-winged Scoter.—At Haunted Lakes, on May 10, my notes record "many pairs of these ducks." Whilst staying at Buffalo Lake in June I saw many hundreds, and they were quite the commonest species. They nest round the lake, inland amongst the bushes, much later than other species. Mr. George Cook informed me that he had found nests in late July.

Erismatura jamaicensis. Ruddy Duck.—I came across several pairs of this handsome species at Buffalo Lake in June, but had no success in discovering a nest. Mr. George Cook showed me eggs he had taken a year or two ago. On Parly Lake, Alix, I had observed a pair which were fairly tame. The curious position of the tail, at right angles to the body, determines the species at a considerable distance.

Chen hyperboreus hyperboreus. Lesser Snow Goose.—Mr. James Brindle sent me a pair of these birds, a lucky shot having secured five specimens at

once, from Buffalo Lake on September 26. They were excellent eating. On October 8 I received another male from the same locality.

Almost a thousand, or even more, were noisily migrating south over Alix on October 26 during day and night.

Branta canadensis canadensis. Canada Goose.—I have only seen a single bird on a small pond a few miles north of our house on May 19, and a pair at Buffalo Lake on June 3. My host, Mr. Brindle, owned a pair of tame ones which quickly lured the wild visitors to their deaths. These birds are not protected on account of the damage they cause to the crops; as a result, persecution yearly diminishes their numbers.

Olor sp. ? Swans.—Mr. Walter Parlbby reported three swans on his lake, about two and a half miles west of Alix, for a few days, and I also heard of a flock of seven, on Haunted Lakes, during the last week in April.

Botaurus lentiginosus. American Bittern.—A fairly common summer resident. I first observed a pair at Haunted Lakes on May 10, and flushed a bird off a nest with two eggs at Buffalo Lake on June 5, and Mr. Atkinson found another with four eggs on the 6th. The call of this bird is certainly one of the weirdest I have ever heard, and at first I failed to determine what caused it. The bird which Mr. Atkinson flushed, he said, sat on its nest during a heavy shower, with its bill pointing heavenwards.

Ardea herodias herodias. Great Blue Heron.—For a little while a heron of this species frequented Haunted Lakes, and another Parlbby Lake, during the late summer, but I did not personally see any specimens.

Porzana carolina. Sora.—This species seems to frequent every marsh in the neighbourhood of Alix. Mr. Atkinson found a nest with three eggs at Buffalo Lake on June 1, and at the same locality I also found a nest with nine eggs and another containing thirteen, on the 3rd and 9th of June respectively. These nests were very cunningly concealed in dead rushes. On July 8 I picked up a dead Sora which had flown against the telegraph wires in the main street of Alix.

Fulica americana. American Coot.—Quite the commonest bird on Buffalo Lake, where I found many nests. The average clutch contained ten eggs. I saw two nests with twelve and thirteen eggs respectively. I found eggs in all stages of incubation on June 1. A pair of birds attempted to build near our house, close to a pair of Holboell's Grebes, on a small lake. Some nests were built with landing stages.

Steganopus tricolor. Wilson's Phalarope.—I saw a pair of these birds at Buffalo Lake on June 3, and later found them fairly common. I flushed a pair on June 5 out of some dried grass, where I feel sure they intended nesting.

Recurvirostra americana. American Avocet.—On a small lake near Buffalo Lake I saw a single bird on June 3, where the previous year Mr. George Cook had found several clutches.

Gallinago delicata. Wilson's Snipe.—I found this species plentiful on Buffalo Lake and also around Alix, where I flushed a bird off four eggs on July 18.

Actitis macularia. Spotted Sandpiper.—Not uncommon in this district. On June 21, within a few miles of Alix, my wife and I found three newly hatched young on the roadside, after a close search for a quarter of an hour.

Oxyechus vociferus vociferus. Killdeer.—Two or three pairs were observed during my visit to Buffalo Lake in June. Mr. Atkinson found a handsome clutch of four eggs at this locality early the same month. Another clutch had been destroyed by crows.

Bonasa umbellus togata. Canada Ruffed Grouse.—This last season was an excellent one for grouse, as coveys were large and numerous. A nest with ten eggs was found near the house on May 25. These birds are quite fearless and afford poor sport, as they are not easily flushed, even with a dog. They are very bold in defence of their young, and endeavour to lure one away from the vicinity of their brood or nest by feigning a broken wing.

Perdix perdix var. Hungarian Partridge.—Mr. Walter Parlbby informed me that fifteen brace of these birds, received from New York, were turned down in April 1909 close to Alix. Unfortunately a snow-storm, which doubtless caused many deaths, occurred the next day. Various reports stated that a few birds were seen the following year, but since then they seem to have disappeared. The annual report of the Department of Agriculture for Alberta for 1913 states that "the Hungarian or European Partridge (no scientific name given), which was imported and distributed in the Calgary district some few years ago, has increased to such an extent that it has been deemed advisable to declare an open season." The bag limit was placed at twenty-five

birds for the season, and five per day, the open season being during the months of October and November.

Tympanuchus americanus americanus. Prairie Chicken.—A fairly common species and very tame during the nesting season, but wild enough soon after the shooting season opens.

Zenaidura macroura macroura. Mourning Dove.—I received a specimen from Mr. George Cook, which he shot at Buffalo Lake on November 9. He states that it is very rare and this was the only one seen.

Circus hudsonius. Marsh Hawk.—May 13 is my first record for this species, which later in the season may daily be seen flying over the sloughs in search of prey. I received a young male in the flesh on September 17.

Accipiter velox. Sharp shinned Hawk. —I received an immature male bird on October 6 which was shot near Alix. The species seems rare in this district.

Astur atricapillus atricapillus. Goshawk.—I first observed this species on May 15, flying over a lake near our house. A fine specimen boldly flew into our poultry yard on October 15, but did no damage to the chickens. I shot an immature bird on the 28th which also came to worry the poultry. A nice male specimen, shot at Alix, was presented to me on November 26.

Buteo borealis borealis. Red-tailed Hawk. —In a small copse bordering a large grassy slough I found a nest of this species on May 9. It was placed in a straight poplar about 35 feet from the ground and contained three eggs, dullish white slightly blotched with pale red markings, and well incubated. The birds were very noisy, and kept in the vicinity until we left.

On June 21, shortly after my wife and I almost drove over a brood of young Buffel-headed Ducks (see notes under that species), we saw a Red-tailed Hawk evidently searching for them. A pair flying around the house on August 17, mewing like European Buzzards. I shot a male, heavy in moult, on September 26. The crop contained a partly digested squirrel.

Aquila chrysaetos. Golden Eagle.—This bird seems to be fairly common, as I saw a good many in various taxidermists' shops and hotels at Calgary and Edmonton. At Mirror a youth has a magnificent specimen which was wounded at Spotted Lake about a year ago. I observed a Golden Eagle feeding on a rabbit within a few hundred yards of the house on October 20.

Haliaeetus leucocephalus leucocephalus. Bald Eagle.—Whilst at Buffalo Lake, on May 19, a farmer showed me a very fine specimen of this species he had picked up from a nest which a gale had blown down, together with the whole tree, four years ago. During the present year it has assumed the white head and tail, which even yet are not so pure as is attained by more adult specimens.

Mr. George Cook brought me an immature female shot at Buffalo Lake on September 28. The spread of wings measured seven feet two inches, and the crop was filled with fish.

Falco sparverius sparverius. Sparrow Hawk. —A common summer visitant. I saw one investigating the nesting site of the Buffel-headed Duck I found close to the barn (see note re Buffel-head). A single bird first seen near Alix on May 6.

Asio wilsonianus. Long-eared Owl.—On May 24 I went to Haunted Lakes, where Mr. H. Hickling showed me an old hawk's nest tenanted by a pair of Great Horned Owls. Below this nest I found the legs of a Long-eared Owl which had been picked by a young well fledged youngster of the larger species.

I received a male bird on September 26 and another on the 13th of following month.

Asio flammeus. Short-eared Owl.—At Buffalo Lake on June 5. Mr. Atkinson found a nest in the long grass close to the water, with five eggs on the point of hatching. Near the same locality Mr. George Cook found another with four eggs on June 9. A specimen in the flesh was shot near Alix and presented to me on October 15.

Cryptoglaux acadica acadica. Saw-whet Owl.—I received a specimen on December 5, which was shot a few miles south of Alix.

Bubo virginianus pallascens. Western Great Horned Owl.—Near Buffalo Lake on May 16, I found a pair of young Owls of this species sitting in an old hawk's nest which was placed in a high and leafless poplar. Mr. George Cook ascended the tree with climbing irons and brought me the birds, which were well grown. The remains of a Shoveler Duck and Blue-winged Teal lay in the nest and a few small bones of various birds.

At the present date they are full grown and thriving in my barn, and are quite tame. Whilst Cook was looting the nest the female frequently sat just above his head uttering croaks sounding like "werk," "werk," but the male kept at a distance.

I caught a fine bird in a gin-trap on October 21 close to the house, and received a living specimen on November 2, caught near Alix. Both of these birds are now in the barn and feed readily on rabbits, musk-rats, etc. This species is fairly common in this locality and can often be heard calling at night.

Nyctea nyctea. Snowy Owl.—I heard lately that a pair of birds had been seen near Mirror in November, and believe it is a regular, though rare, winter migrant to this locality. I have seen two mounted specimens which were probably obtained locally, but they possess no data. Mr. George Cook presented me with a fine living specimen on December 13, which is still with me.

Surnia ulula caparoch. Hawk Owl.—I received a pair in the flesh on September 17, shot near Alix. I have also a living specimen which had damaged its wing against the telephone wires and up to the present time (December) has quite recovered in captivity. This species I believe to be common here. Fisher states that the note is a shrill cry, which is uttered while the bird is on the wing. My specimen gives voice to a melodious "wheup, oop, oop, oop, oop, oop," generally at dusk.

Ceryle alcyon. Belted Kingfisher.—I have only seen a single specimen, which was sitting on the telegraph wires close to Alix on August 5.

Dryobates villosus leucomelas. Northern Hairy Woodpecker.—A fairly common resident throughout the year.

Sphyrapicus varius varius. Yellow-bellied Sapsucker.—In the early spring this species is a quiet migrant, but towards the nesting season is the reverse of silent. It is fairly plentiful in this locality, and I found numerous nests, which are usually situated from twenty or more feet up the tree trunk. I was presented on July 15 with four young birds, which my wife and I reared on house-flies, wasp-grubs, and hard-boiled eggs. We also found, as their name gave us to expect, that they were very partial to syrup and water, which they greedily swallowed. Insectivorous food arriving from home enabled our pets to get through a successful moult, and by October 28 we could see a few red feathers on the heads of the two male specimens. Unfortunately we lost three of these birds, due chiefly to the sudden cold weather, but my remaining specimen continues to do well. A female flew into my shack on July 27, which I released later.

Colaptes auratus luteus. Northern Flicker or Golden-winged Woodpecker.—I noticed a specimen feeding on an ant heap on April 21, and after this date they became quite common. Throughout the nesting season I found many borings for nest holes. They seem to migrate early in the autumn.

Tyrannus tyrannus. Kingbird.—I observed a pair near Alix on April 4. Eggs were found on June 10 near Alix by a friend, and on the village lake I found a nest with four eggs and two others with well fledged young. This species is a common summer resident.

Corvus brachyrhynchus hesperis. Western Crow.—This was almost the only bird observed during our run from Halifax to Calgary, flying about singly or in small flocks, generally close to the towns and villages enroute. It is one of the commonest birds in this locality and is most destructive to game. I noticed many nests of ducks and other birds destroyed by crows. Several nests were observed placed in low bushes about six or eight feet from the ground. I found 3 crows' nests on May 21 close to Alix all containing five eggs highly incubated. The birds were very tame, and fiercely mobbed me until I shot three.

Pica pica hudsoni. Magpie.—I observed a pair of Magpies close to the house on September 12, and another pair on October 20 in the same locality.

Molothrus ater ater. Cowbird.—At Alix a few of these birds arrived on April 17, where they are common summer visitors. A friend found an egg in the nest of a Clay-coloured Sparrow with three of the rightful owner's, near Alix on June 10, and I found two eggs in a Song-Sparrow's nest, which held five of the latter's, in the same locality on June 14.

Xanthocephalus xanthocephalus. Yellow-headed Blackbird.—This species nests commonly around Buffalo Lake in the reeds. I first noticed nests with eggs on June 2.

Agelaius phoeniceus fortis. Thick-billed Red-winged Blackbird.—In company with the Yellow-headed Blackbird this species also nested abundantly in the district and in almost every slough around Alix. I found eggs on June 2 at the former place, and many more elsewhere subsequently.

Sturnella neglecta. Western Meadowlark.—A very common summer resident everywhere. I did not succeed in finding any nests of this species.

It has a most striking and musical song, and prefers to sing from a telegraph pole or fence post.

Quiscalus quiscula quiscula. Purple Grackle.—I observed this species in fair numbers at Buffalo Lake and Alix. At the former place I found several nests on June 2 ready for eggs, and on June 10 two clutches of three eggs.

Passer domesticus domesticus. House-Sparrow.—At Haunted Lakes on April 17 I saw three or four pairs of this species and a few in Alix, but on December 2 this number had increased to over thirty. I did not observe any at Buffalo Lake.

Astragalinus tristis tristis. Goldfinch.—Not a very common summer visitant. I first observed a pair on July 3 at Alix.

Plectrophenax nivalis nivalis. Snow-Bunting.—A flock of ten appeared near the house on November 16 and they have since been numerous throughout the district.

Passerculus sandwichensis alaudinus. Western Savannah Sparrow.—Fairly common around Buffalo Lake, where I found a clutch of four eggs cleverly concealed in the grass, on June 3, and on June 14 another clutch of five eggs with two Cowbirds' eggs near Alix. This bird is rather shy, and on this account may be more abundant than would appear to be the case.

Spizella pallida. Clay-coloured Sparrow.—I was shown a nest with three eggs and one of a Cowbird near Alix on June 10, and another on the 14th with young just hatched.

Junco hyemalis hyemalis. Slate-coloured Junco.—I did not observe this species until September 23, when there were many flying about close to the house.

Zamelodia ludoviciana. Rose-breasted Grosbeak.—Rare. I only saw three specimens early in May near Alix. I was surprised at the sweetness of the song.

Petrochelidon lunifrons lunifrons. Cliff-Swallow.—Under the eaves of a barn at Dartmoor (about two and a half miles west of Alix) a number yearly build their nests in June.

Iridoprocne bicolor. Tree-Swallow.—Mr. George Cook showed me several coffee-pots with the spouts removed, in which these swallows nested every year in front of his house at Buffalo Lake. These birds also nest in old woodpeckers' nests of the smaller species, and I saw the Swallow at Alix in May hunting round the woods near the house for nesting holes. Mr. Atkinson and I found a nest by the roadside, near Buffalo Lake, in a hole in an old burnt poplar stump on June 3. It was plentifully lined with feathers, but had no eggs. I also found a nest at Haunted Lakes too high up to examine.

Riparia riparia. Bank-Swallow.—A few pairs nested in a railway cutting near Haunted Lakes in June.

Bombycilla garrula. Bohemian Waxwing.—Dr. Henry George informed me that a pair of these birds nested this year in a garden at Red Deer, and Mr. George Cook has a skin which was obtained near Buffalo Lake on January 19 this year; he had also found a nest on June 8, with four young birds, in the same locality. One was dead in the nest, but the rest were ready to fly. He further stated that these birds were plentiful during January and September.

Troglodytes aedon parkmani. Western House-Wren.—Fairly abundant. On June 23 I was shown a nest which had been built in the string-box attached to a reaping machine. It was a very bulky structure made of small twigs, plentifully lined with fowls' feathers and horse hair. It contained six eggs. I found another nest, near Alix, which was merely a collection of a few feathers and horse hairs built in a hole in a small decayed poplar tree, and another in June in a large stump which held young birds.

Telmatodytes palustris iliacus. Prairie Marsh Wren.—Mr. Atkinson and I found numerous nests of this species in the reeds around Buffalo Lake, but none held eggs. The birds, nevertheless, were always very noisy but shy.

Penthestes hudsonius hudsonius. Hudsonian Chickadee.—A common resident. Except in the nesting season they keep in small flocks and are very tame. I found a nest with young in a hole in a dead poplar, about three feet from the ground, near the house on May 30.

Planesticus migratorius propinquus. Western Robin.—Plentiful around Alix, but I failed to observe any at Buffalo Lake. I saw many young birds but no nests.

Respectfully submitted,

R. E. FISKE,

President.

MRS. B. M. GEORGE,

Secretary-Treasurer.

INDEX

	Page
Agricultural Societies, Financial Statement	122
Secretaries	113
Alberta Horse Breeders' Association (Appendix A)	286
Alberta Cattle Breeders' Association (Appendix B)	292
Alberta Sheep Breeders' Association (Appendix C)	297
Alberta Swine Breeders' Association (Appendix D)	302
Alberta Provincial Fat Stock Show, Report of Secretary (Appendix E)	305
Annual Report of Alberta Natural History Society, (Appendix F).....	307
Bacteriological and Chemical Laboratory, Report of Director	229
Brand Recorder's Report	159
Cheese Production	79
Contagious and Infectious Diseases	233
Crop Statistician's Report	193
Monthly Weather Review	193
Summary of Average and Yields of leading grains during last ten years	207
Crops	209
Dairy Commissioner's Report	77
Marketing of Dairy Products	79
Creamery Butter Production	78
Cheese Factories and Creameries	81
Deputy Minister's Report	9
Demonstration Farms Report	15
Estray Animals, Sale of	63
Entire Animals, Sale of	57
Enrollment of Stallions	50
Game and Fire Guardian's Report	165
Big Game	167
Game Guardians	172
Fire Guardians	186
Live Stock Commissioner's Report	49
Horses	49
Cattle	50
Swine	56
Sheep	53
Enrollment of Stallions	50
Brand Readers	60
Sales of Estray Animals	63
Sales of Entire Animals	57
Sales of Animals under Pound District Ordinance	59
Stock Inspection	52
Exports	70
Monthly Weather Review	193
Poultry Superintendent's Report	146
Markets	146
Educational Work	147
Provincial Agricultural Schools Report	147
Vermilion School	25
Olds School	30
Claresholm School	36
Provincial Medical Officer of Health's Report	232
Contagious and Infectious Diseases	233
Provincial Veterinarian's Report	43
Protection of Game	165

	Page
Publicity Bureau, Report of	223
Report of Chief Game and Fire Guardian	165
Report of Dairy Commissioner	77
Report of Deputy Minister	9
Report of Demonstration Farms	15
Report of Provincial Agricultural Schools	23
Report of Provincial Veterinarian	43
Report of Director of Provincial Laboratory	229
Report of Live Stock Commissioner	49
Report of Poultry Superintendent	146
Report of Provincial Medical Health Officer	232
Report of Recorder of Brands	159
Report of Provincial Sanitary Engineer	225
Report of Superintendent of Fairs and Institutes	112
Report of Superintendent of Women's Institutes	12
Report of Superintendent Seed and Weed Branch	
Stallion Enrollments	50
Stock Inspection	70
Vital Statistics	249
Births, Marriages and Deaths	250
Appendix A.	
Alberta Horse Breeders' Association, Report of Secretary	286
Appendix B.	
Alberta Cattle Breeders' Association, Report of Secretary	292
Appendix C.	
Alberta Sheep Breeders' Association, Report of Secretary	297
Appendix D.	
Alberta Swine Breeders' Association, Report of Secretary	302
Appendix E.	
Provincial Fat Stock Show, Report of Secretary	305
Appendix F.	
Annual Report of Natural History Society	307



